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UNITED STATES DEPARTMENT OF AGRICULTURE
BULLETIN No. 1119

Washington, D. C. PROFESSIONAL PAPER April 25, 1923

LUMBER CUT OF THE UNITED STATES 1870-1920

DECLINING PRODUCTION AND HIGH PRICES AS RELATED TO FOREST EXHAUSTION

BY

R. V. REYNOLDS, Forest Examiner, and ALBERT H. PIERSON
Statistician in Forest Products, Forest Service

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WASHINGTON
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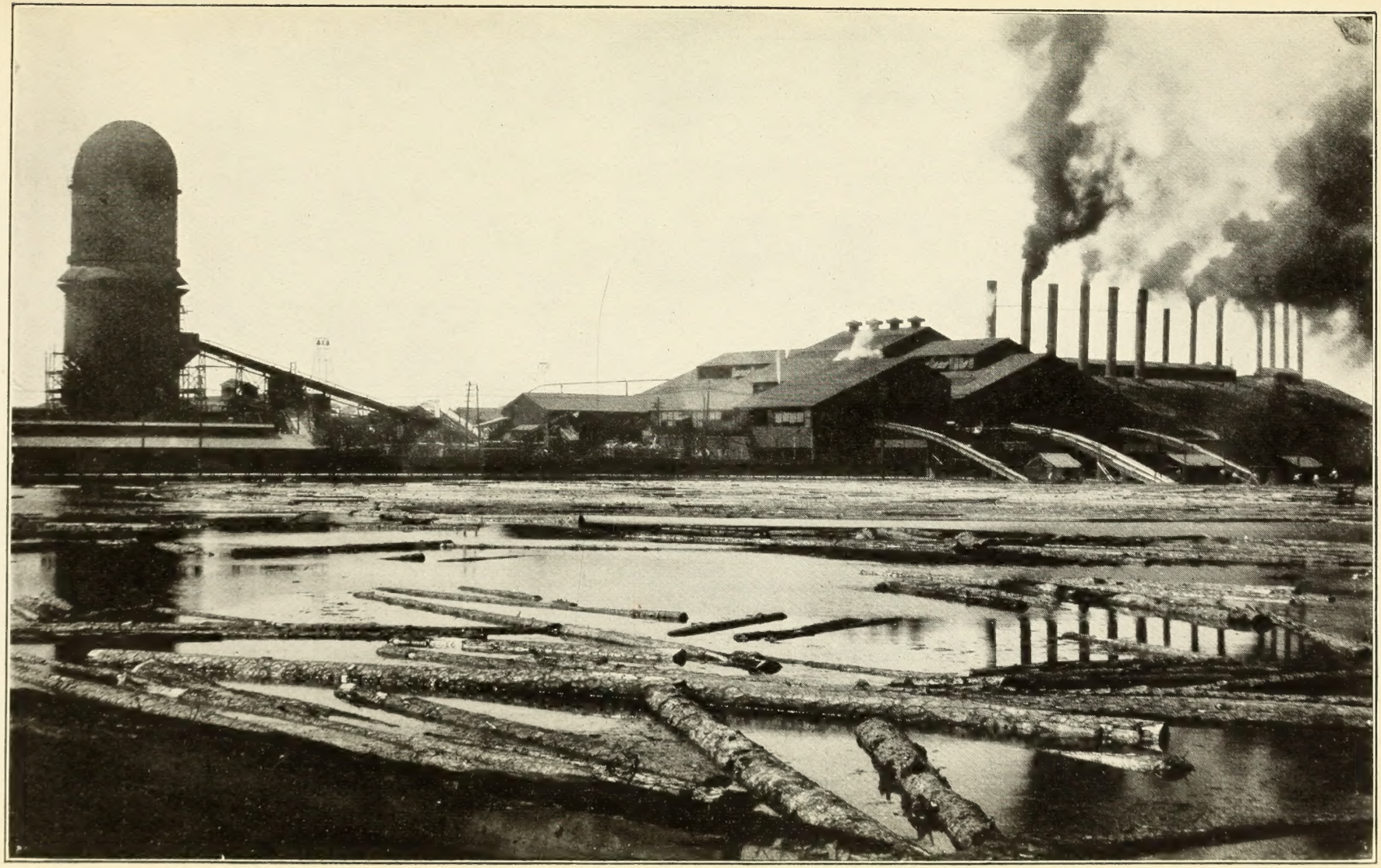
1923



CLASS 5 SAWMILL.

This enormous plant has cut as much as 1,000,000 feet of lumber per day, which is the equivalent of 50 to 300 acres of forest. In Class 5 are less than 4 per cent of our mills, but the class produces nearly 60 per cent of the total cut. (See Tables 2 and 3.)

CLASS I SAWMILL.

Mills of this class are mainly portable, and their average cut is about 200,000 feet a year. As the big mills finish their cut the small mills clear up the more scattered and less accessible timber, and work in second growth. Class 1 contains nearly 70 per cent of the mills, but produces only 10 per cent of the cut.

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INTRODUCTION.

This report, so far as it relates to lumber production in 1920, is the latest of a series that had previously covered the period 1904 to 1918, inclusive, with the exception of 1914.[1] It is of wider scope than the rest of the series, for it contains not merely detailed statistics of the 1920 production of lumber, lath, and shingles in the continental United States, but comparable figures from previous reports of the Forest Service and the Bureau of the Census back to 1870. In its interpretation of the significance of the decline in lumber production it goes far beyond its predecessors because of the growing need for emphasizing the effect of forest exhaustion upon the high prices and the diminishing production of lumber.

In the decennial year 1920 the effort has been made to provide, in Tables 4 and 6, the most complete possible statement of comparable quantitative data for lumber production, by States and species. Table 4 is summarized to show production of the several lumbering regions for 50 years. In the years previous to 1870 lumber production was enumerated only by valuation, and Table 4a exhibits these

[1] A detailed summary of the 1914 lumber production is given in Department of Agriculture Bulletin 506, which contains the figures for 1915.

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valuations, thus compiling in one volume the entire lumber production figures of the Government which are regarded as sufficiently reliable and comparable for ordinary reference.

Diagrams have been introduced to illustrate other features of interest, such as the national lumber production during the past century, production by the several lumbering regions for 50 years, numerous curves of production by species, the quantity and mill value of lumber consumed per capita since 1890, the trend of prices of yellow pine and Douglas fir, and the relation of annual growth to consumption.

ACKNOWLEDGMENTS.

The 1920 statistics for the western States were collected through the district offices of the Forest Service at Missoula, Denver, Albuquerque, Ogden, San Francisco, and Portland. The reports for New York were collected by the New York Conservation Commission. The work for the rest of the States east of the Rocky Mountains was done in the Washington office of the Forest Service.

Acknowledgment is made for assistance in the collection and compilation of reports on which this bulletin is based to A. B. Strough, New York State Conservation Commission; and to C. N. Whitney, District 1; Miss F. Ruth Waters, District 2; Quincy Randles, District 3; N. J. Fetherolf, District 4; C. L. Hill, District 5; and C. W. Gould, District 6, of the Forest Service.

The National Lumber Manufacturers' Association, through its affiliated organizations, assisted in securing reports from certain mills. As in previous years, the Bureau of the Census, U. S. Department of Commerce, extended helpful cooperation.

PART I. SIGNIFICANCE OF DECLINING LUMBER PRODUCTION.

In the recent statistics of American lumbering two years are signalized by events of outstanding significance both to the lumber industry and to the public which it serves.

The first was 1907, when the highest point in lumber production was reached, and the production curve started on a long, steep, downward slant, the end of which can not be determined.

The second was 1920. The census of that year has brought out three facts which are not only important but ominous when considered in relation to each other and to the events of preceding years.

1. Production continued to decrease in the face of an accumulated need for the use of lumber which is unparalleled.

2. The average value of lumber at the mills continued to rise to a point far above the high mark set in 1919. There was, in fact, an upheaval of lumber prices such as has never before been experienced, culminating in a peak which dwarfed the previous peaks, and followed by a decline as rapid as the rise. This spectacular event is of more than passing interest, both as an historical fact and as a symptom of economic stress. Yet in fundamental importance it is far surpassed by the third fact, namely, that—

3. Lumber production increased in 11 Western States, but only 1 Eastern State cut more than in 1919. In the other 36 States production decreased. This is fresh evidence of the shift of the main center of lumber production from the southern pine belt to the West. It means not only that the great consuming centers of the East must haul a heavy percentage of their lumber twice as far as before, but also that we are now tapping our last reserve of virgin softwood forest.

This change comes at the end of 300 years of exploitation. It touches the welfare of every individual in our growing population. What does the future hold for us? What steps should be taken to meet national needs? The bare figures suggest questions of this kind but do not answer them. For that reason it is pertinent to discuss with the statistics of 1920 the related conditions in production, prices, and supply.

LUMBER PRODUCTION DECREASED.

The production of lumber in 1920 was 33,800,000,000 feet board measure, which is 2.2 per cent less than the production in the previous year. This, in itself, does not seem a great reduction. The feature of real meaning with regard to production is that 1920 shows one more slip downward, and that we have reached a point where the cut is 27 per cent less than the peak production which occurred in 1907. Figure 1 shows graphically the decline of the last 13 years. While it was not continuous, its trend is unmistakable and its amount notable. The average rate of reduction is 2 per cent per year. The decrease in 1920 was therefore approximately the average for the period since the peak. It was, however, considerably less than the average for the period since 1912, during which the downward slant has been more pronounced.

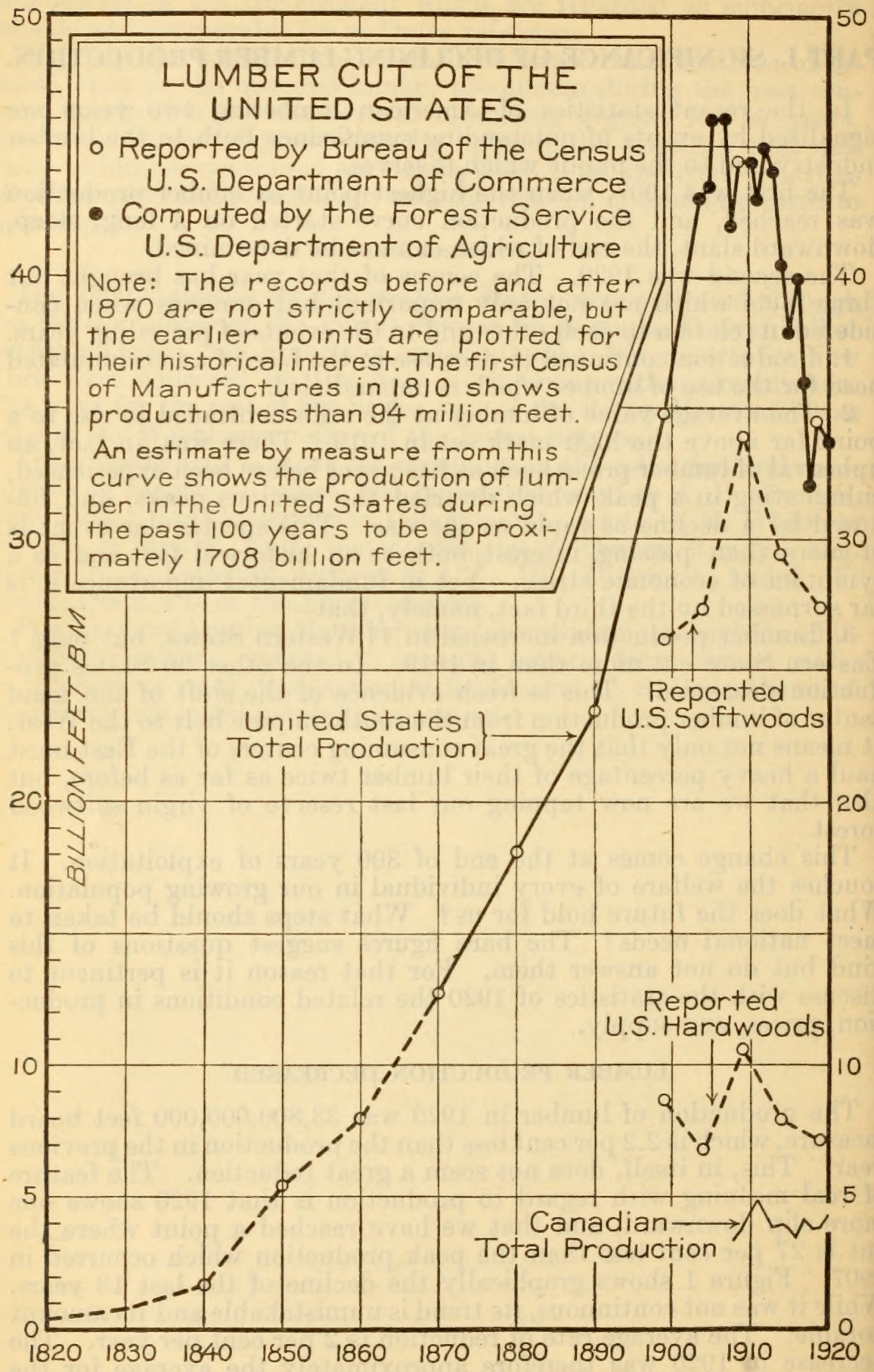

LUMBER CUT OF THE UNITED STATES
o Reported by Bureau of the Census U.S. Department of Commerce
• Computed by the Forest Service U.S. Department of Agriculture
Note: The records before and after 1870 are not strictly comparable, but the earlier points are plotted for their historical interest. The first Census of Manufactures in 1810 shows production less than 94 million feet.
An estimate by measure from this curve shows the production of lumber in the United States during the past 100 years to be approximately 1708 billion feet.
BILLION FEET B.M.
United States Total Production
Reported U.S. Softwoods
Reported U.S. Hardwoods
Canadian Total Production
0
5
10
20
30
40
50
1820
1830
1840
1850
1860
1870
1880
1890
1900
1910
1920

FIG. 1.—The rapid decrease in lumber production is largely due to the fact that four trees are taken from our forests for every one restored. The decrease of production since 1907 is 27 per cent.

This persistent decline in lumber production is the more worthy of attention because the population of the United States has increased by 15 per cent in the last decade. There now exists an amount of unsatisfied demand for construction unequaled at any previous period in our history. Normally, under such conditions, considerable increase would be expected. It is possible, of course, that with the increase of urban residence, under building restrictions, more brick, stone, steel, and concrete are being used for modern types of dwellings. It is also true that the best grades of the most desirable species are no longer so readily obtainable. The substitution of other materials is probably one reason for the decreasing use of wood by an increasing population. But there is at least one other cogent reason, and that is the steadily increasing cost of lumber to the consumer.

Other things being equal, the annual per capita consumption of a commodity affords a measure of its abundance, and a declining per capita consumption indicates an increased economic burden. If supplies are relatively ample, the average person can use the commodity freely. As the supply decreases, rising prices tend to restrict this use.

Figure 2 shows the per capita lumber consumption of the United States continuously for 100 years, contrasted with partial data for other countries. The average consumption in the United States has declined rapidly and constantly from 500 feet or more per person in 1907 to 316 feet in 1920, a decline of 37 per cent in 13 years, or nearly 3 per cent a year. The decline began when the Southern States passed their maximum production, the Central States, the Lake States, and the Northeast having passed their peaks 10 years before. (See Fig. 6.) As soon as national production began to decrease, the steadily increasing population caused the per capita curve to take a downward slant considerably steeper than the one followed in the upward movement previous to the peak. Canada and the United States show the largest per capita consumption in the world because of their great forest possessions in combination with advanced standards of living and means for rapid exploitation of natural resources. The per capita consumption of each is decreasing. The United States now occupies a position very little above that of Newfoundland. Then come Sweden and Russia, followed by Germany and France. Practically the total supply of the latter two comes from man-made forests grown upon areas very much restricted because of the pressing need for the use of all agricultural lands. Next below comes England, which imports practically all of the lumber used, and last of all is Japan, also a heavy importer. If the curve continues to fall at the same rate, the amount of timber used in 1930 by each person in the United States will be below that shown for Russia. It is not a cheerful prospect for Americans who desire to build homes.

A reason why Americans are not buying and using more lumber is indicated in Figure 3, in which "A" illustrates the great increase in the mill value of the lumber consumed by each person subsequent to 1915. The decline from the peak reached in 1906 coincided with the financial panic in 1907. "B" shows the same values reduced to the basis of the purchasing power of money, computed with the figures of 1913 as 100. The average American is using about the same amount of lumber as he did in 1866, fully one-sixth less than in 1890, and 40 per

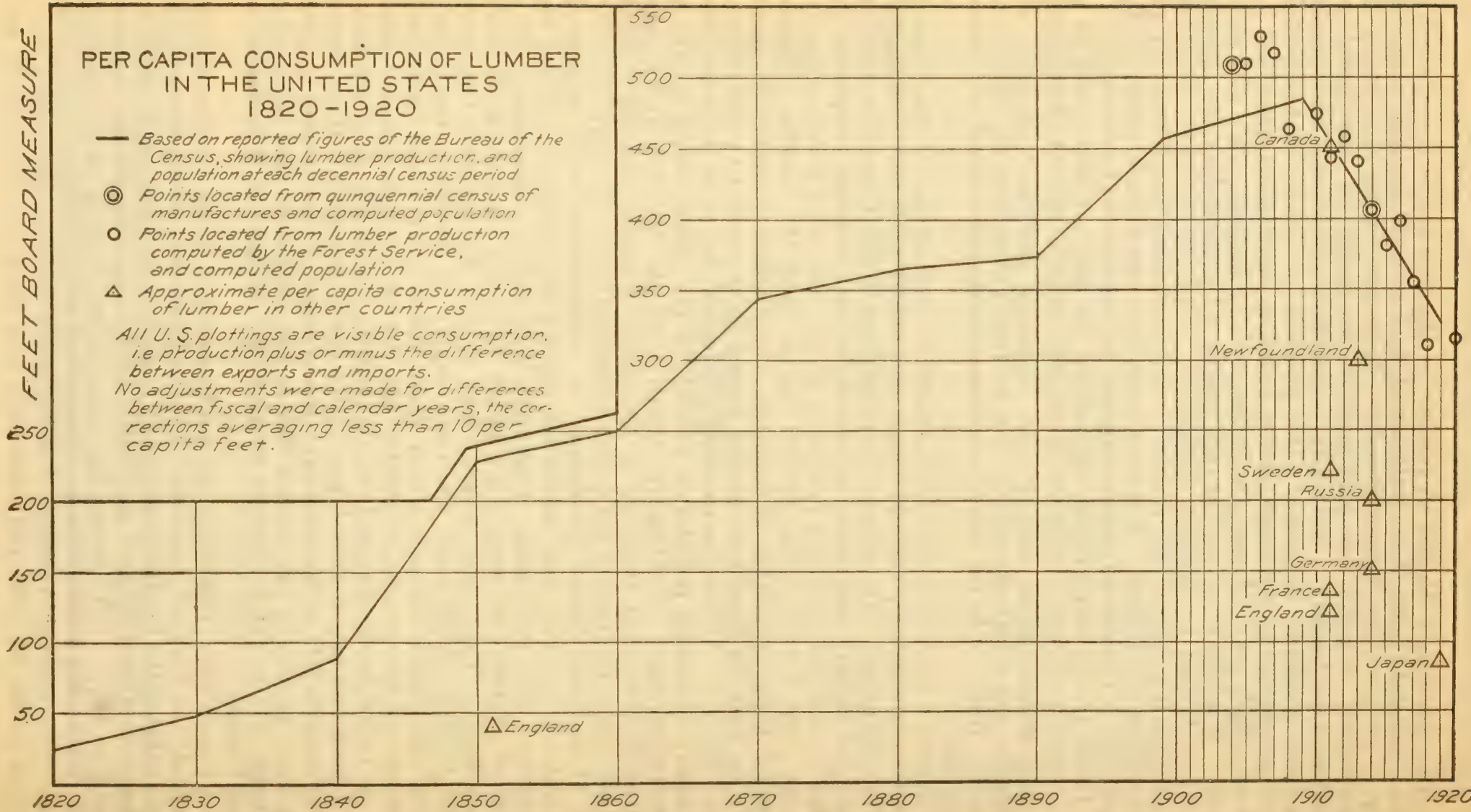


FIG. 2.—If this curve continues to fall at the present rate the average American will use less lumber in 1930 than the average Russian did before the World War.

cent less than in 1896. In 1920 for his reduced yearly quota he paid in dollars three times as much as he did in 1890. Small wonder that he hesitates about building a house, even though average incomes have greatly increased. Even measuring the cost in terms of other commodities, he paid the manufacturer in 1920 more than he did 30 years before for a supply which was nearly one-sixth larger.

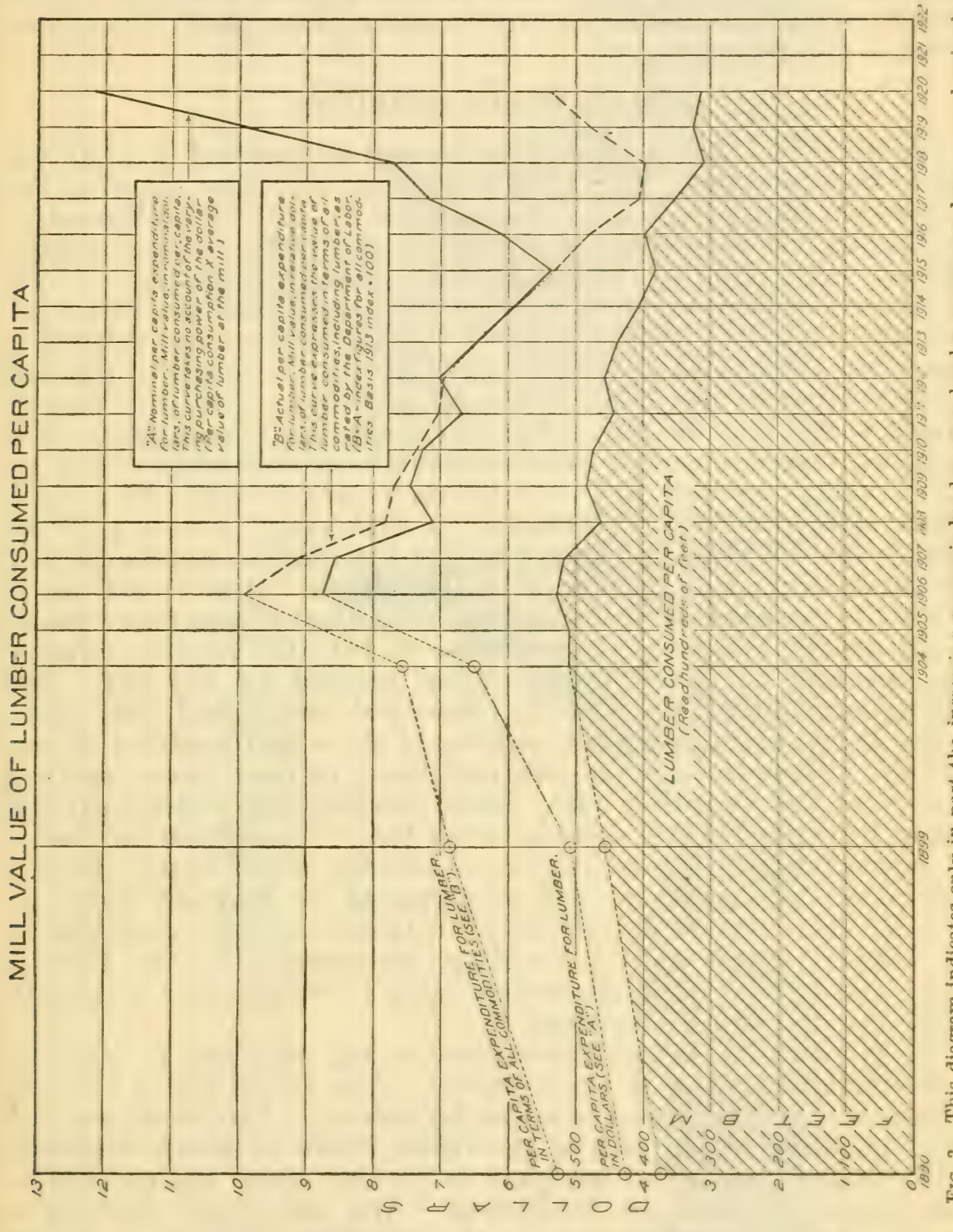

MILL VALUE OF LUMBER CONSUMED PER CAPITA
DOLLARS
PER CAPITA EXPENDITURE FOR LUMBER IN DOLLARS. (SEE A.)
PER CAPITA EXPENDITURE FOR LUMBER IN TERMS OF ALL COMMODITIES (SEE B.)
LUMBER CONSUMED PER CAPITA (Read hundreds of feet)
FEET
1890
1899

FIG. 3.—This diagram indicates only in part the increasing economic burden upon lumber consumers, because no showing is made of the increases in freight rates or the spread between mill values and retail prices.

Other things being equal, production is in large measure regulated by demand, upon which high prices exert a strong restrictive influence. Extremely high prices may extinguish demand. But the cost of production is the fundamental basis upon which prices rest, and one of the main factors determining cost is the accessibility of the raw material. As the forests shrink and retreat before the mills to more distant, swampy, or mountainous regions, the cost of production or

transportation, or both, inevitably rises, and with it the price of the lumber delivered at the distant market.

In this age of specialization Americans no longer build their homes of hewn logs and whipsawed planks. They are dependent upon the sawmills. If they use lumber, they must pay the prices asked. The incomes of most people are very little in excess of their necessary expenses. Hence even a slight rise in lumber prices results in a widespread tendency to reduce per capita consumption, which operates to decrease the annual cut.

LUMBER PRICES INCREASED.

The average value of lumber at the mill as reported in 1920 was $38.42 per thousand. This is an increase of $8.21 per thousand, or 27 per cent in excess of the value reported in 1919 to the Bureau of the Census. It is the highest average value and the greatest annual increase ever recorded, although the extremely high prices were maintained only a few months. Hand in hand with the persistent decrease in lumber production went a persistent increase in valuation. The value at the mill in 1920 was 247 per cent in excess of the mill value as reported in 1899. In the 21 years since 1899 the value of lumber went up at the rate of fully 5 per cent per average year. On the percentage basis prices rose faster than the cut diminished. (Fig. 4.)

The value reported for 1920 by no means reveals the violent upheaval in prices which occurred in that year, because it is an average for the year, and shows neither the maximum attained nor the subsequent swift decline of lumber prices. Here it will be of interest to review briefly some of the conditions which drove prices to the peak. Following the armistice in 1918 the lumber industry was seriously hampered by conditions created by the war. The logging camps, the mills, and the offices had contributed their quota to the Army, often losing the services of those best qualified to run the job. When the soldiers returned, many of them never regained touch with the work they left. Labor troubles were widespread and serious throughout 1919, and stocks ran low. Throughout the period of demobilization transportation conditions were fairly chaotic, punctuated by embargoes and embarrassed by frequent shortages of cars. Throughout the winter of 1919–20 weather conditions in the lumber woods were particularly unfavorable in the Central States and in the South, the woods being so watersoaked as greatly to hamper lumbering operations.

The Northeast and the Central States had each cut 96 per cent of their original areas of virgin timber. The Lakes States had cut 90 per cent, and the South was not far behind. The South was the only lumbering region east of the Great Plains in which depletion of the timber stands had not gone so far that there was no reasonable chance to increase production. And the South itself was seriously handicapped because of the conditions indicated. Sixty-one per cent of the total remaining saw timber is west of the Great Plains, and the remainder in the East is no longer so distributed as to serve its markets with the former ease.

During the war domestic consumption of lumber was relatively low because most forms of construction, including dwellings and apartment houses, were classed as nonessential activity. Both on the farms and in the cities a vast amount of building was deferred,

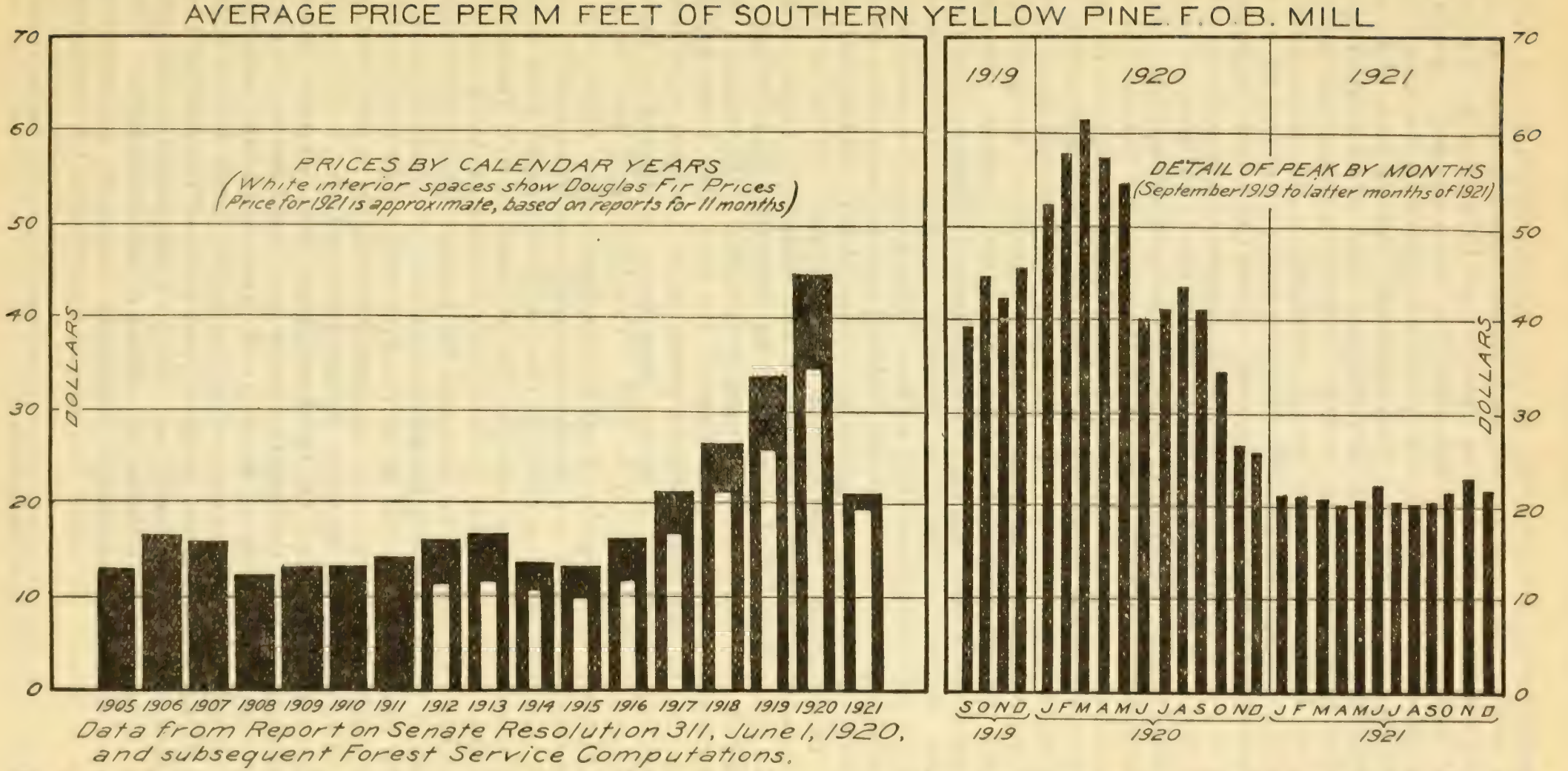

AVERAGE PRICE PER M FEET OF SOUTHERN YELLOW PINE. F.O.B. MILL
PRICES BY CALENDAR YEARS
(White interior spaces show Douglas Fir Prices
Price for 1921 is approximate, based on reports for 11 months)
DOLLARS
70
60
50
40
30
20
10
0
1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921
1919
1920
1921
DETAIL OF PEAK BY MONTHS
(September 1919 to latter months of 1921)
DOLLARS
S O N D
1919
J F M A M J J A S O N D
1920
J F M A M J J A S O N D
1921
Data from Report on Senate Resolution 311, June 1, 1920,
and subsequent Forest Service Computations.

FIG. 4.—The price of lumber, not the quantity remaining on the Pacific coast, is the factor which will determine whether your son will build a house. In 1921, following the peak, prices did not recede to the old low levels. It is difficult to see how still higher prices can be prevented if we continue to destroy the forests without restoring them.

a situation that was revealed in the crowded housing and soaring rents. Before the war a million families lacked houses. In 1918 the construction of houses was less than in 1919, and in 1919 only 70,000 houses were built when 500,000 [2] were needed. A similar postponement of lumber consumption took place in the other large industries using wood as a raw material. Immediately following the armistice this enormous demand was freed of all restriction by the Government and began to exert its influence upon an industry which in the East, at least, was ill prepared to expand its production. For several months following the end of the war there was little activity in the lumber business. Then the wheels of business began to turn, slowly at first but with increasing momentum, under the stimulus of increasing orders. By August, 1919, the demand for lumber was overwhelming, and prices were rising rapidly. Manufacturers were straining to increase their cut, for production was still below normal, and the stocks were badly depleted. The mill price of yellow pine had advanced from $27 a thousand to the unprecedented figure of $40. At this point many people thought the top of the price wave had been reached. Consumers, many of whom assumed that prices would fall at once after the war, were complaining bitterly and urging investigations of alleged price fixing. Domestic orders continued to increase, the price of lumber continued to rise throughout the winter. The demand was such that purchasing agents were virtually bidding against each other for the possession of any kind or grade of lumber, badly milled, half seasoned, or otherwise. The market was practically in the hands of the sellers, who were in a position to ask what they chose. Prices were so unstabilized that no one had an accurate idea of value. In early February, 1920, southern pine went to $55. The eastern mills had no stocks and cars were scarce. By that time home builders were unable to pay the enormous prices asked for lumber, although the building operations of many large firms continued as fast as lumber and workmen could be had. The high rents received may have justified building by wealthy landlords, but there was no chance for the small home builder, especially as bank credits could not be obtained in proportion to the vastly increased cost of construction, which had risen nearly 200 per cent in five years. The conditions were impossible for the maintenance of business on a large scale. In March the demand for lumber checked decidedly. Rumors of price softening became persistent, but just as persistent was the lessening of retail inquiry. The whole mental attitude of Americans had changed, and the period of reckless expenditure was over. The public had made up its mind not to buy.

Then came the crash. On or about March 20 the lumber market went over the top of the greatest price peak ever known, with the southern pine mill price at $61.60, and other woods in proportion. At retail southern pine was costing the public from $66 to $175 a thousand, depending upon the grade and point of consumption; red gum, $247.50; and quartered oak, $385. Concessions to buyers in certain instances were followed by a flood of canceled orders. Prices continued to slip downward, while stocks increased, and numerous mills shut down. By June the market was practically dead, North

[2] In March, 1922, a national conference of builders at Washington, D. C., declared that there is need for the immediate construction of 1,500,000 new houses.

Carolina pine sales being reported at 18 per cent of normal. In December, 9 months after the peak, southern pine had declined to $25.88. Its low postwar level of $20.36 was reached in April, 1921.

Such is the story of the greatest lumber price wave ever recorded. The commonly stated cause was the avalanche of demand which descended upon the lumber industry at a time when especially unfavorable conditions in transportation and manufacture cut off consumers from manufacturers. This statement is true, but it is not the whole truth. A contributing cause was the fact that eastern forests were no longer plentiful and well distributed enough to relation in the chief centers of consumption to make them a sure competitive source of supply, when extraordinary difficulties arose.

The price peak of 1920 was not the first, and it may not be the last. It was a repetition on a larger scale of previous history. Following the Civil War there was a price peak, definitely marked, but not nearly as high. At that time bidding for existing lumber was not so intense, because business was not transacted as rapidly, and ample forests within reasonable reach of the consuming centers made it obvious that there was plenty for all immediate needs. Yet at that time the accumulated demand, increasing consumption, inflation of currency, and lengthening lines of transportation to points in the Lake States, caused lumber prices to settle at a new high level, with softwoods about 33 per cent and hardwoods 100 per cent higher than the averages before the Civil War. So, following the recession of the price wave in 1920 a similar new higher level may be in process of establishment. (See Fig. 4.) From January, 1921, to March, 1922. southern pine varied but little from the average mill price of $21.18. At this stage it is about 50 per cent higher than the average from 1905 to 1916, but whether this is a permanent new level it is still too early to determine. A much smaller advance in prices would be ample to cut down the per capita consumption of lumber.

CENTER OF PRODUCTION SHIFTING TO THE PACIFIC COAST.

For 100 years the lumber industry has been in the process of migration from one forested region to another. The first lumbering took place along the Atlantic Coast, from Maine southward to the Royal Colonies in Virginia and the Carolinas. But lumbering as we now know it did not get under full headway until nearly the middle of the last century, with the introduction of improved forms of machinery and large merchant mills. As the first cut of pine in the more thickly settled coast regions drew near its end the exploitation of the white pine forests of the Lake States began and the hardwood regions of the central Appalachians were opened to the market. As the cut of the Lake States drew to its close many lumber manufacturers of that region removed their operations to the South and began the attack upon the great belt of long-leaf pine stretching from Virginia to Texas. Each of these moves increased the distance between the centers of production and the centers of consumption. Now four-fifths of the original southern pine is gone, and there is in progress a marked drift of lumbermen from the Southern States to the Pacific Coast, and to the northern part of the Rocky Mountains, known as the Inland Empire.[3]

[3] In this general statement it is not intended to overlook the fact that some important lumber manufacturing firms moved from New York directly to the South, and others from the Lake States to the West.

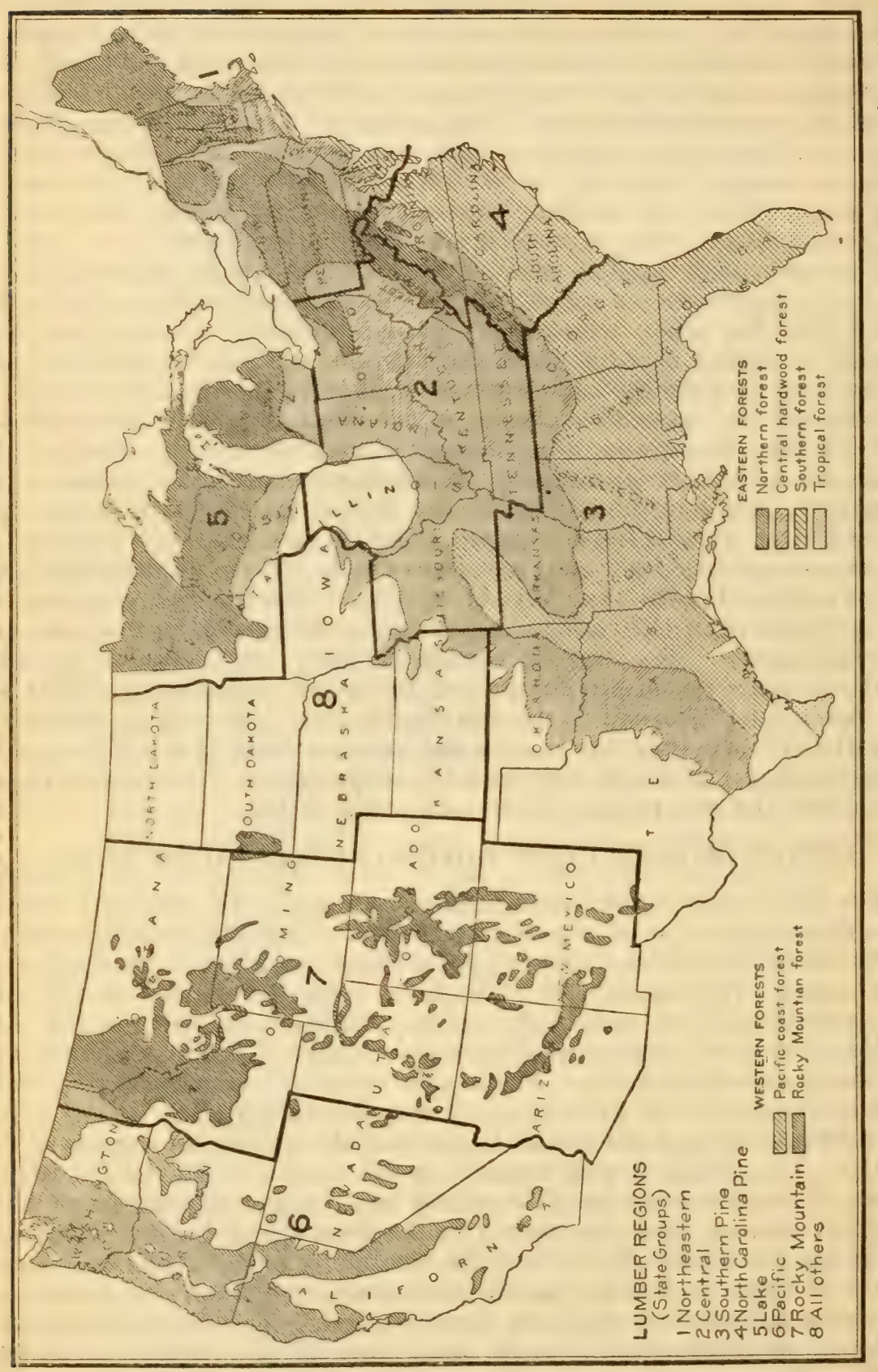


FIG. 5.—Half of our remaining saw timber lies in that relatively small forest area along the Pacific coast, 2,000 to 3,000 miles distant from the greatest centers of consumption. The freight rate from the coast is more than the wholesale price of first-grade hardwoods in Civil War times.

For several years lumbering operations on the Pacific Coast have been increasing.

In 1920, with the exception of New York, the only States which increased their production were those of the Pacific group and part of those in the Rocky Mountains. The growing ascendancy of the West is plainly evident, as shown by Figure 6. The production curves of the Southern States are falling rapidly, but those of the Rocky Mountains and the Pacific coast are ascending upon a steeper slant, and for the first time they exceed the production of the southern pine group. Whether there will be a period of increased cut of southern timber before the southern graph descends still further is a question upon which no confident prediction can be made.

As a further indication of the regional shift the number of Class 5 [4] mills on the Pacific coast increased by 18 per cent in 1920, while the South and the Lake States each apparently lost about one-eighth of their Class 5 mills. There is a degree of uncertainty in this evidence because 1920 was a year of such reduced production in the East that some of the southern mills included in this count may merely have fallen into a lower production class. On the other hand, some of the western mills of Class 4 may have increased their cut to Class 5 dimensions. There is less doubt, however, when we examine the mill figures on another basis, including Class 3, 4, and 5 mills in the comparison, which means all mills cutting over a million feet per annum. Of such mills the Pacific coast showed a gain of 169, or 26.7 per cent, in 1920 as compared with 1919, while the number of similar mills in the southern pine and North Carolina pine groups of States, combined, decreased by 490, or 19.7 per cent. In general it appears that many southern mills are nearing the end of their cut and either going out of business or moving to the West.

The recapitulation under Table 4 shows that all of the lumbering regions except the Pacific and Rocky Mountains are past their maximum production. Although the South probably will retain a strong position in the lumber production of the country for a number of years, there is every indication that its ascendency in the lumber world has passed the zenith and that henceforth we must look more and more to the West as the main center of supply.

Figures 7, 8, 9, and 10 show that in 1920 most of the species exhibiting an increased cut are western species. During 1919 and 1920 western lumber greatly extended its hold upon the eastern market. The greatly reduced cut of the Lake States and the inability of the storm-bound South to deliver diminished the competing power of those regions. The greatly increased prices for the first time enabled the timber of the Pacific slope to compete on even terms with the product of the eastern forests. Within a year or 18 months Douglas fir became the principal species throughout the greater part of the Middle West. It captured Minneapolis, a stronghold of white pine. It was found in Chicago in greater volume than any other species. In Kansas City it formed more than 50 per cent of the lumber stocks. In spite of strikes, storms, and embargoes, the western invasion plowed east to the very citadels of eastern production.

[4] Class 5 mills are those of the largest size, cutting 10,000,000 feet or more annually. For explanation of mill classes see headings of Table 3.

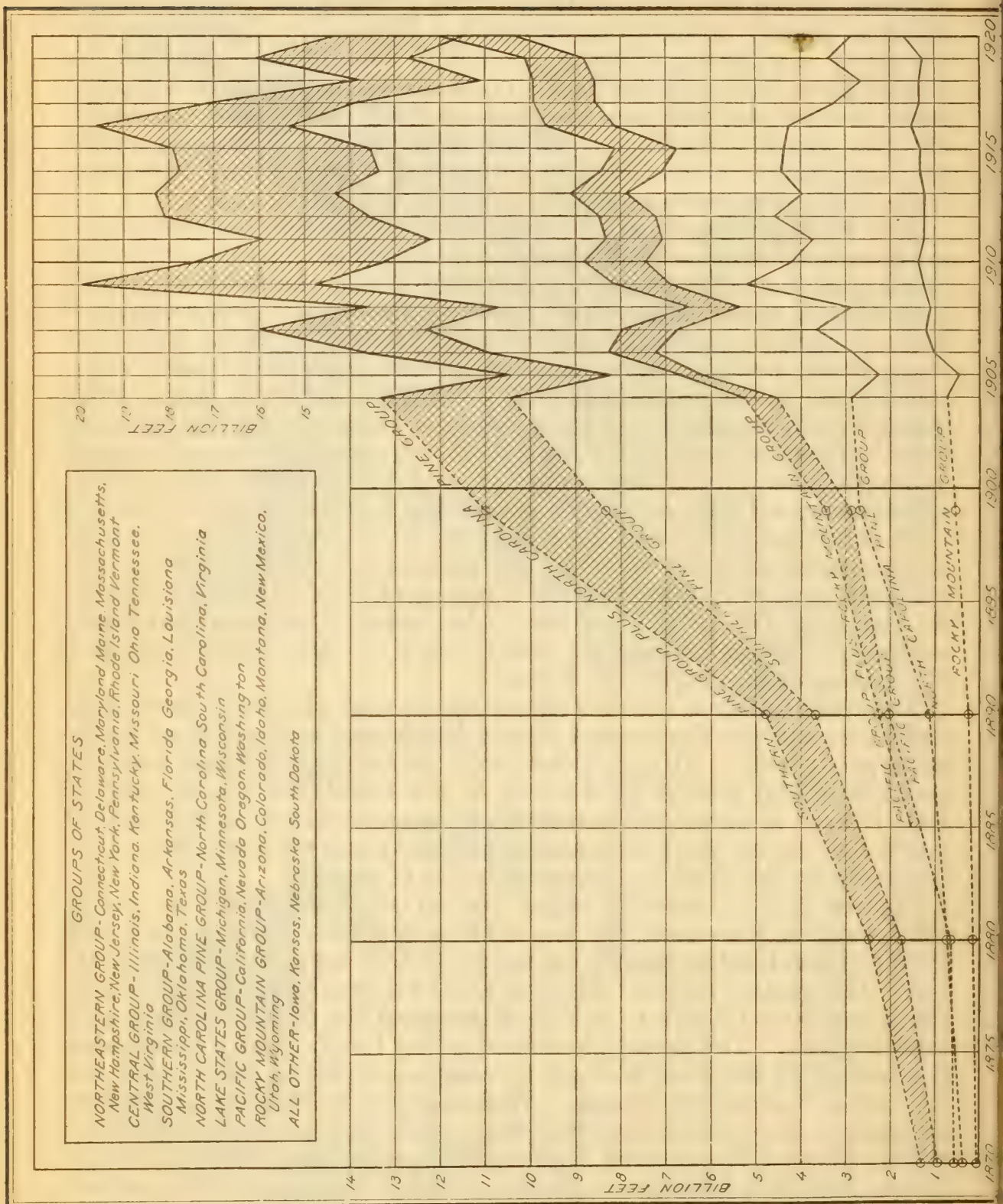
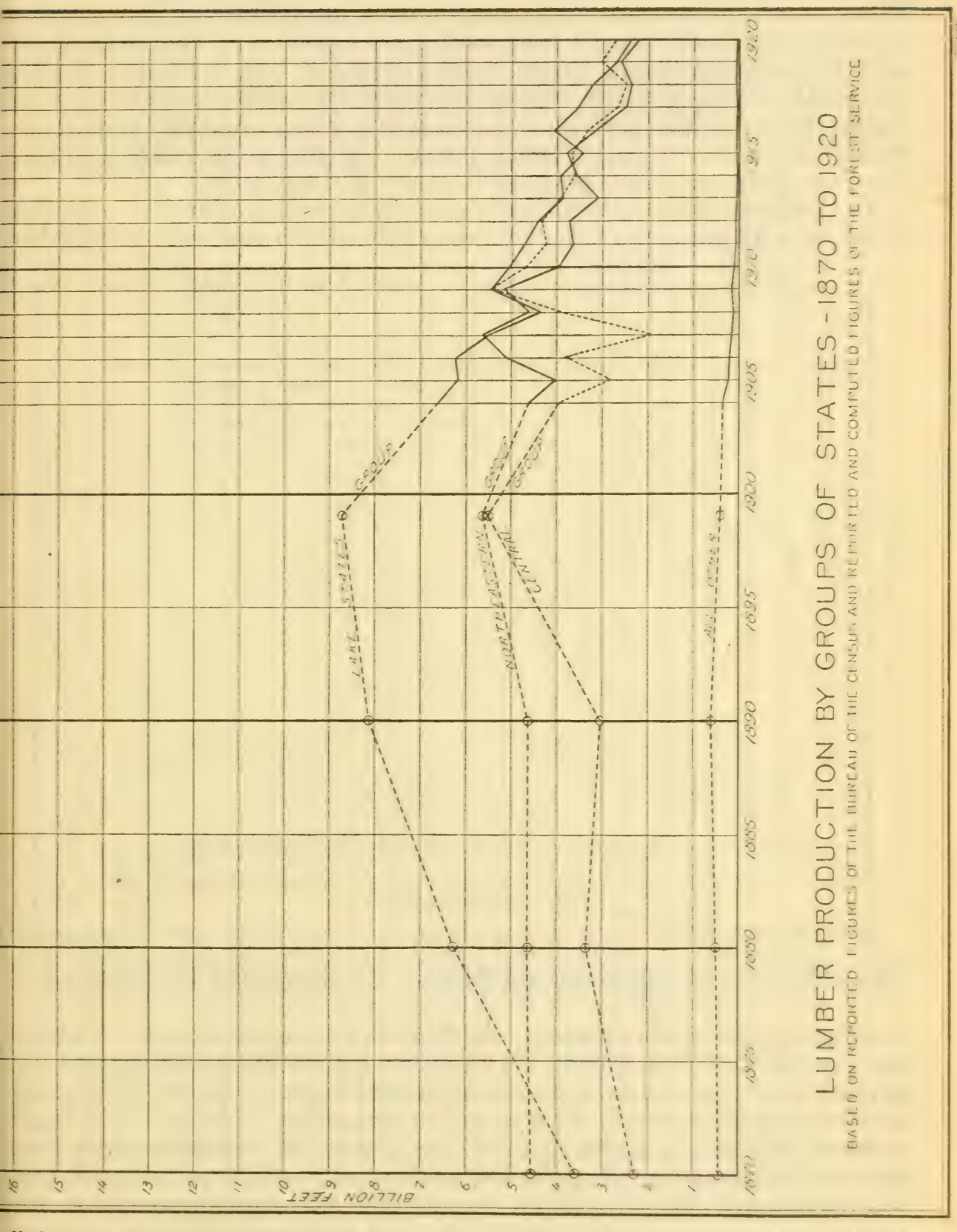


FIG. 6.—In 1920, for the first time, the graph of western lumber production overlapped that of the South. The produ
long before the Pacific timb



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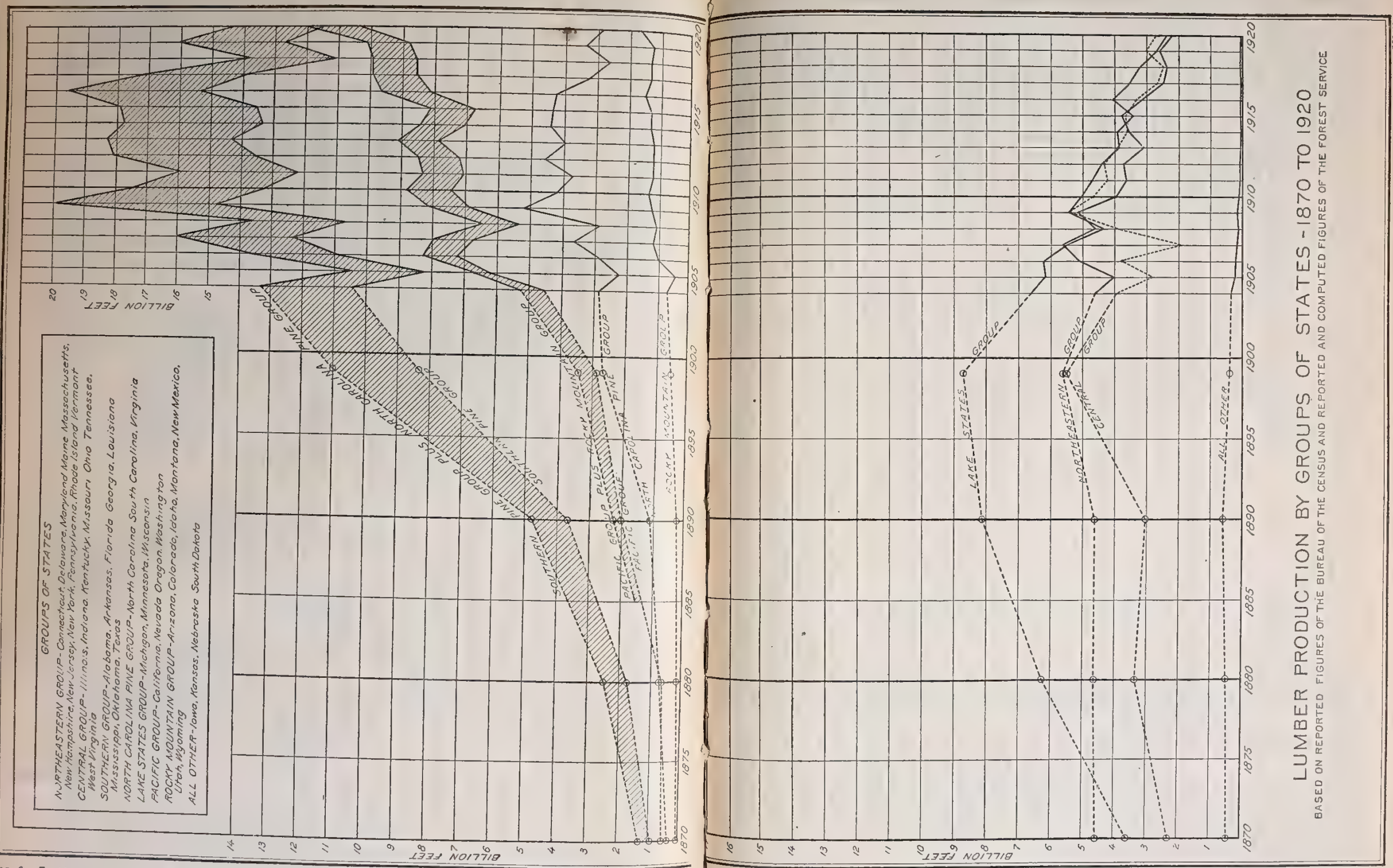
LUMBER PRODUCTION BY GROUPS OF STATES - 1870 TO 1920
BASED ON REPORTED FIGURES OF THE CENSUS AND REPORTED AND COMPUTED FIGURES OF THE FOREST SERVICE
BILLION FEET
1870
1875
1880
1885
1890
1895
1900
1905
1910
1915
1920
LAKE STATES GROUP
NORTHEASTERN GROUP
CENTRAL GROUP
SOUTHERN PINE GROUP
NORTH CAROLINA PINE GROUP
PACIFIC COAST GROUP
ROCKY MOUNTAIN GROUP
ALL OTHER
GROUPS OF STATES
NORTHEASTERN GROUP-Connecticut, Delaware, Maryland, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont
CENTRAL GROUP-Illinois, Indiana, Kentucky, Missouri, Ohio, Tennessee, West Virginia
SOUTHERN GROUP-Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Oklahoma, Texas
NORTH CAROLINA PINE GROUP-North Carolina, South Carolina, Virginia
LAKE STATES GROUP-Michigan, Minnesota, Wisconsin
PACIFIC GROUP-California, Nevada, Oregon, Washington
ROCKY MOUNTAIN GROUP-Arizona, Colorado, Idaho, Montana, New Mexico, Utah, Wyoming
ALL OTHER-Iowa, Kansas, Nebraska, South Dakota

FIG. 6.—In 1920, for the first time, the graph of western lumber production overlapped that of the South. The production long before the Pacific timber of all the eastern regions is declining. An adequate source of lumber supply for the East should be created s signs of exhaustion.

No previous shift of location has been marked by such changes in lumbering conditions as are seen in the move from the South to the West. In the South and the Lake States there was relatively little obstruction to lumbering due to mountainous topography. In the West much of the national forest timber, and some of the private timber also, is at present inaccessible on account of the mountains and will require heavy expenditures to get it out. Already about one-sixth of the western timber has been cut, and naturally it was taken from the best and most accessible stands. As time goes on it will become increasingly expensive to log the more remote areas. Less yearlong work can be done because of deep snow.

In the East practically all the timber was privately owned. In the West only 53 per cent of the timber is privately owned, the remainder

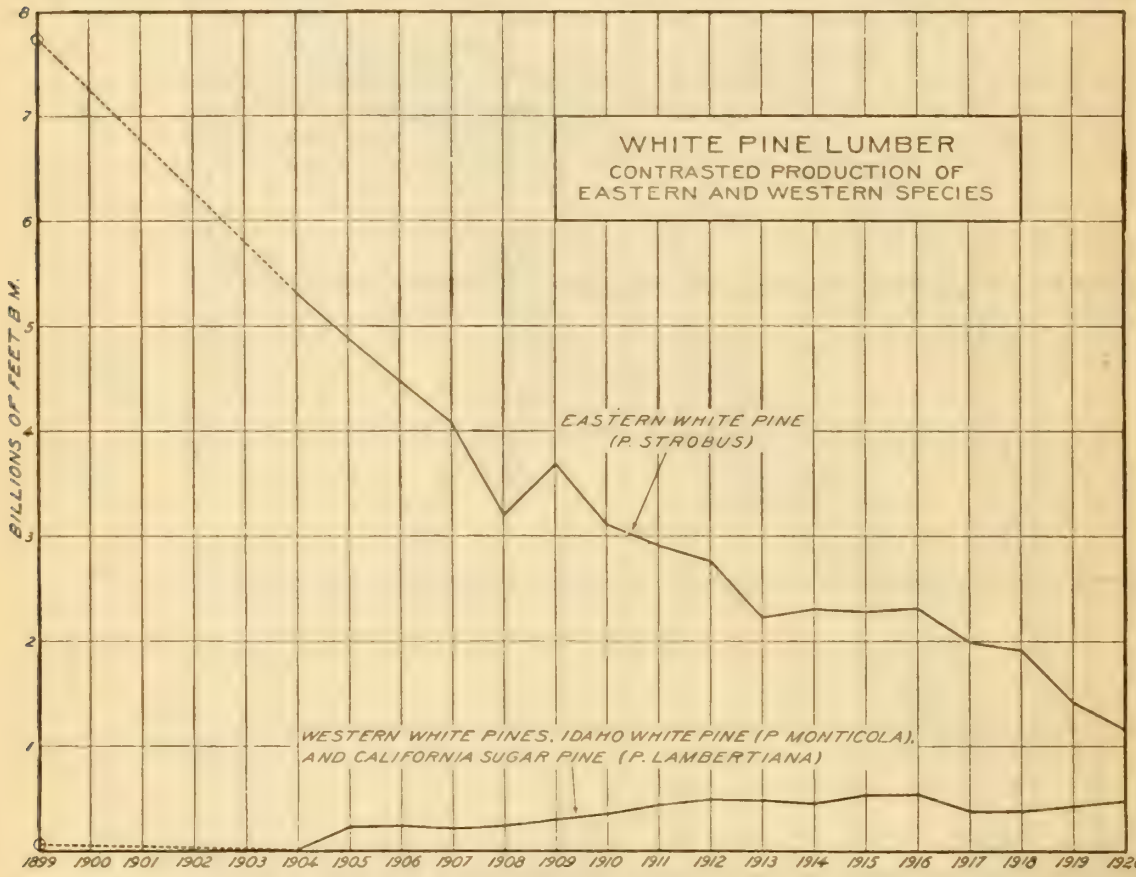

FIG. 7.—Millions of acres which would grow eastern white pine are awaiting reforestation. European nations would not think of neglecting such an opportunity to set their lands and their people at work.

belonging to the Government, the States, or municipalities. Thirty-six per cent of it is within National Forests. The ownership of the private timber is concentrated to a marked degree. Never before was so much timber controlled by so few firms and individuals. Although some of the largest holdings have been decreased within recent years, many of the small holdings have been consolidated into units suitable for operation. This situation apparently offers an opportunity for centralized management, in marketing as well as production, such as has not existed before. On the other hand, the heavy timber holdings of the Government within the national forests provide a means which did not exist in the eastern regions for leveling inequalities in production and prices and maintaining competitive conditions.

The most significant change resulting from the shift is the increased distance between the main center of production and the consuming

centers of the country. Not quite 50 per cent of the lumber produced in the United States is consumed in the States north of Tennessee and east of Iowa. Heretofore the average haul of timber to this region has been between 500 and 1,000 miles. Hereafter a large amount of the supply will have to be hauled between 2,000 and 3,000 miles, although a considerable portion of the western timber may come by sea through the Panama Canal to the East coast markets. In the years when much more timber was accessible to water-borne traffic, transportation cost from $1 to $3 per thousand feet. In the year of this report it costs about $9 per thousand from the South and about $20 [5] from the Pacific coast to New York.

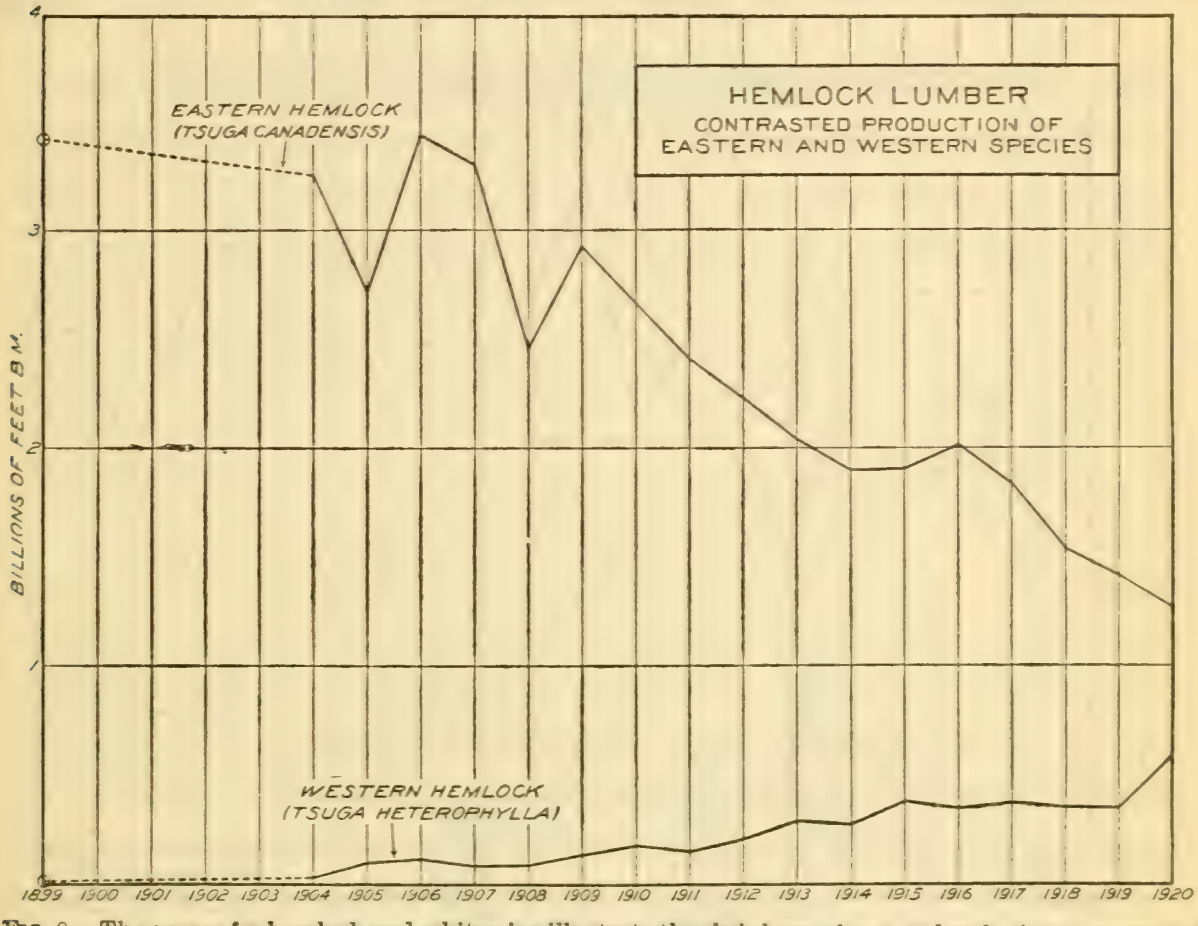

FIG. 8.—The curves for hemlock and white pine illustrate the shrinkage of eastern lumbering as compared with increases in the West.

Not a single factor in the new situation tends to reduce the cost of lumber. On the contrary, almost all factors tend to increase the cost. It is difficult to see, under such circumstances, how any substantial reduction of prices may be expected. The additional cost of transportation across the continent is as much as our fathers paid for first-grade hardwoods before the Civil War.

Price is the factor which will determine hereafter whether the average American will use less lumber or more. There is plenty of timber on the west coast for immediate needs, but if the price is so high that the per capita curve continues steeply downward, then the long-prophesied shortage is already at the door.

The long step to the Pacific coast is the final shift in the migration of the lumber industry, unless Americans should desire to cross the

[5] In March, 1922, the steamer rate per thousand from the West coast to New York was approximately $18.25.

Pacific in the search for new sources of lumber. The coast has the last large supply of North America, and the chances for securing softwoods elsewhere are not favorable, although the suggestion has repeatedly been made that once the native forests are exhausted we have only to purchase our lumber from other countries.

We must have huge quantities of softwood timber, the best of all woods for general purposes. The remaining pine, fir, spruce, and larch of the world are gathered in three great bodies. One is in northwestern America and Canada, another in Scandinavia and Finland, and the third in European and Asiatic Russia. There is little hope from Canada, for her so-called limitless forests are rapidly being developed to their capacity for the needs within the British Empire. The

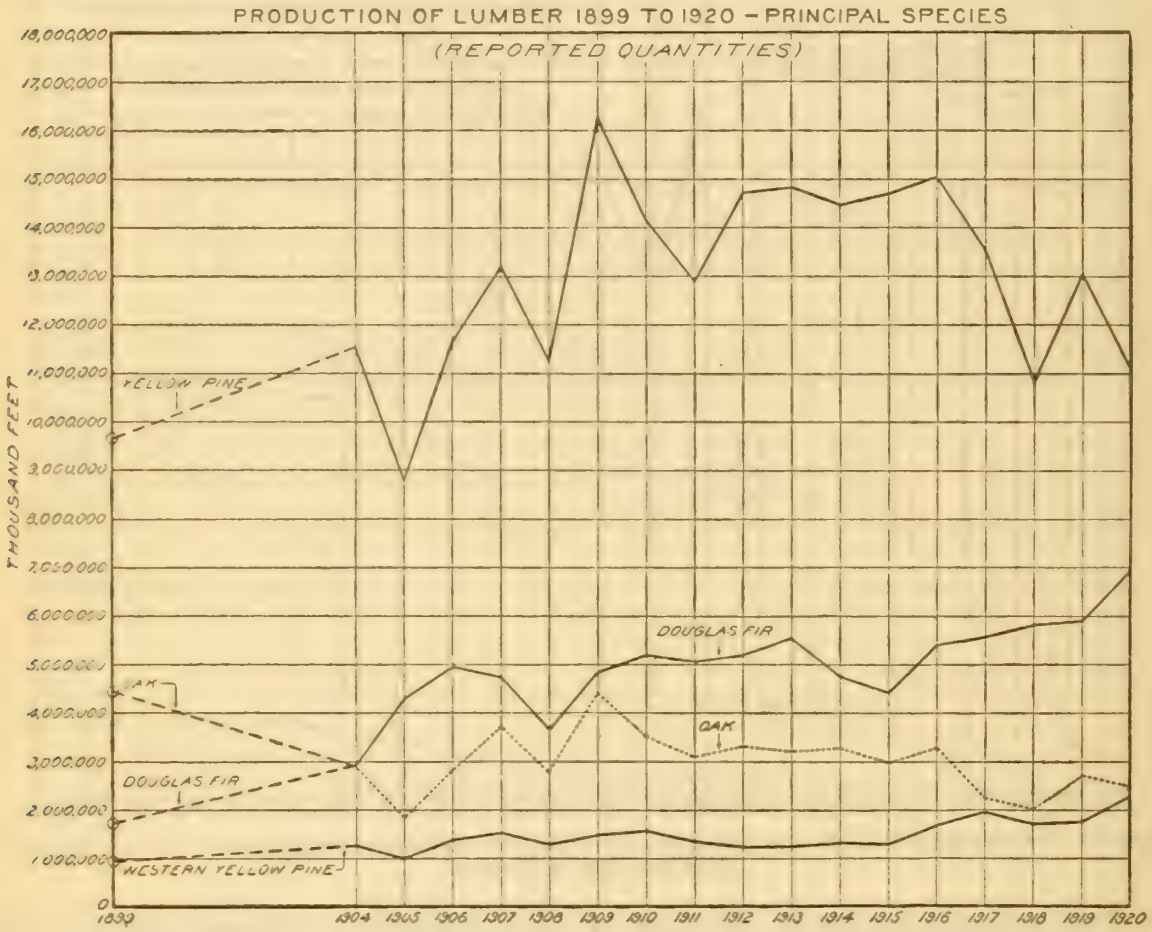

FIG. 9.—Yellow pine and Douglas fir are now rivals for first place in point of production. It is possible that within the next few years the graphs of these two species will cross.

Alaskan forests are better adapted to pulpwood than to lumber. The largest part of the European forest (except that in Russia) is man-made, and by no stretch of the imagination can one fancy that its surplus will ever supply even a fraction of our huge consumption in addition to the needs of its owners. Sooner or later Russia will resume her industrial activity and rebuild her thousands of dilapidated villages. A great part of her European timber will then be needed at home. For any surplus from European forests we should have to compete with the rest of the world, and the mere fact of our competition would inevitably increase the price.

The forests of Siberia are ringed about by the nations of Europe and Asia, some of which already have an eager eye upon this timber because it is essential to their participation in world trade. All of

these nations are in greater actual need for timber than the United States.

It is practically certain that China, with her hundreds of millions, will develop industrially. Although for the present she imports from America, when ours is gone she will probably requisition great quantities of the Siberian timber.

Add to this the import demands of Japan and England, and the lesser requirements of Australia. Nearly 40 per cent of all human beings live within 2,500 miles of this timber, and even England, the most distant nation of those mentioned, is nearer to it than is Chicago. It requires little imagination to see that by the time our needs drive

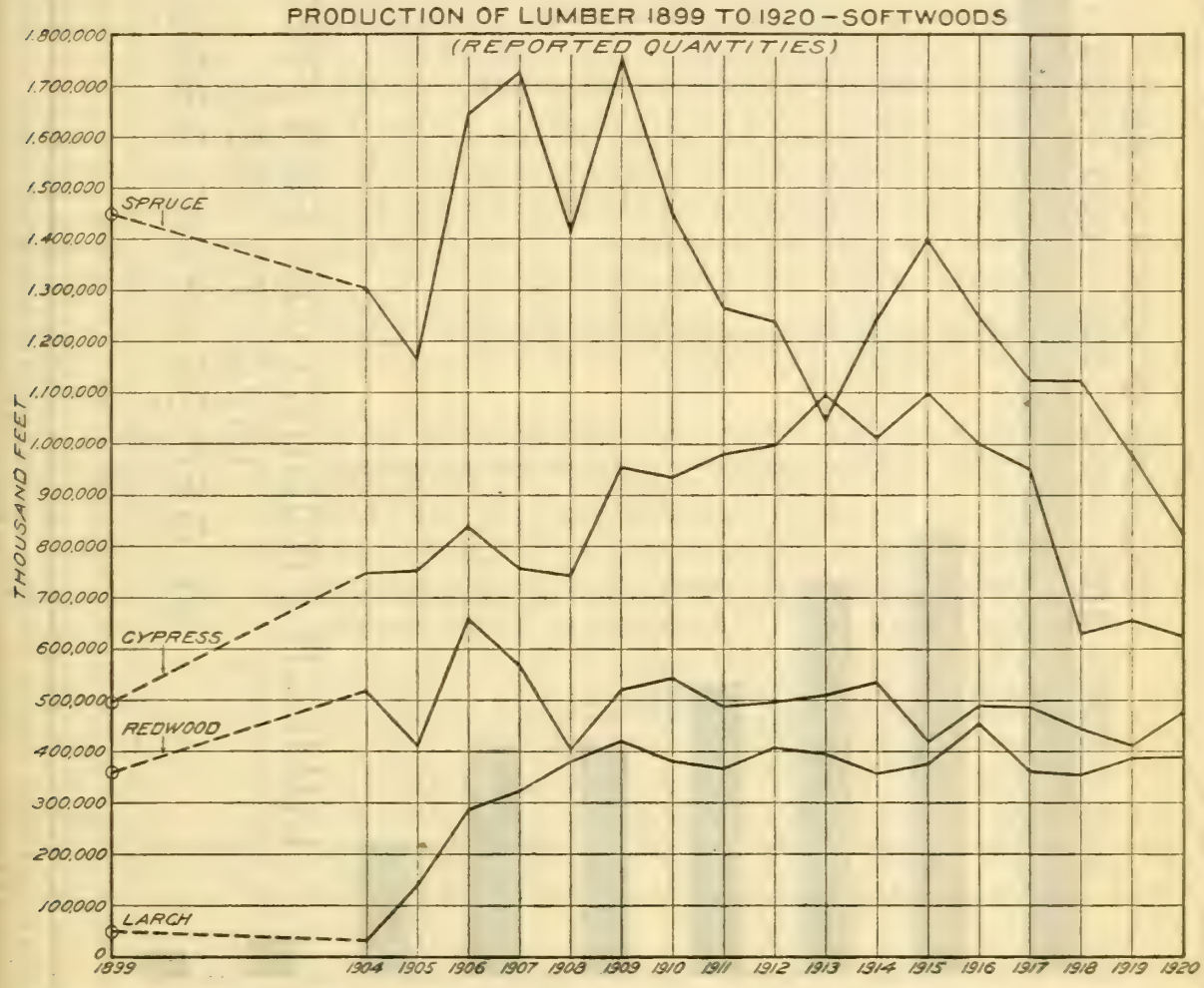

FIG. 10.—Of these important softwoods two are rapidly declining and the others show no marked increase. With southern pine also decreasing heavy requirements must be made upon Douglas fir and western yellow pine.

us to seek heavy importations, the supplies from that source will be largely monopolized by other countries. Even if all the Siberian timber were at the undisputed call of the United States, the quantity available for annual export would amount to only one-fourth or one-fifth of our demand for lumber. It is not to be assumed that even our present financial supremacy will enable us to shoulder out of the market nations which have that timber near at hand and then transport it three or four times as far to supply our needs. If the cost of transportation from the Pacific coast is a serious economic burden, what shall be said of transportation from Siberia? Obviously, it would be very unwise to depend upon imports for any great part of our future lumber supply.

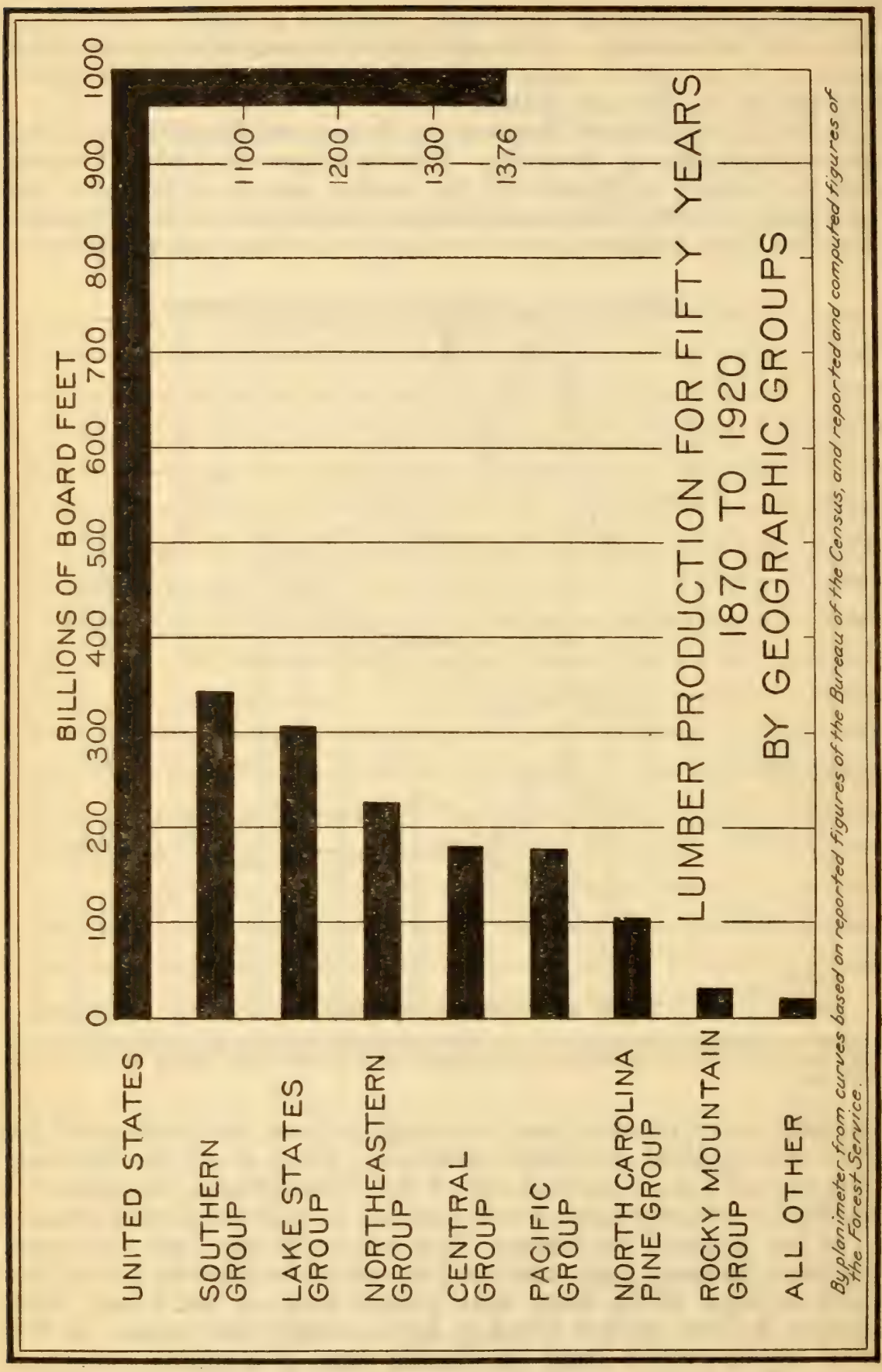

FIG. 11.—The industrial development of the United States required five times as much lumber in the last half century as in the 50 years preceding 1870. Shall that development now be cramped for lack of forest products when we have 81,000,000 acres of cut-over lands awaiting reforestation?

Measures of economy, though helpful, will be found insufficient where such an enormous demand is involved. We must utilize them to the utmost, but economize as we will, the introduction of inferior species, the use of lumber substitutes, the general application of timber preservatives, all of them together can not account for more than a fraction of the 35,000,000,000 feet of lumber a year which we must have unless our present standards of living and industrial facilities are to be greatly reduced.

TIMBER GROWING THE ONLY REMEDY.

It is already too late to avoid the results of the past century of exploitation. The pinch for lumber will be upon us before new forests can be grown. It will be felt not only in the scarcity or increased cost of wooden articles. Directly or indirectly every commodity of life will cost more because of the depleted supply of forest products. Every American will pay an unnecessarily large part of his income for shelter and food and clothing, fuel, transportation and amusements, necessities and luxuries alike, because wood will be no longer plentiful and near at hand. This economic punishment will increase in severity as time goes on. There is only one way by which its pressure can be relieved and removed, and that is by growing enough timber for the national needs.

There seems to be among the American people a sort of naive confidence that each form of national resource will last indefinitely, no matter how great the inroads upon it. There was mild surprise when the buffalo vanished. The practical exhaustion of free Government farm lands aroused a half resentful disappointment. The peak of lumber prices caused widespread indignation, and was attributed to every sort of cause except the fundamental reason that depletion had so localized the remaining timber supplies as to make them unavailable. The fact that we are beginning in earnest to cut our last reserve of virgin timber, with no suitable cycles of young forest to take its place, may not cause a ripple of public sentiment, for the public has heard a great deal of these things and as yet no cataclysm has occurred. There will be no cataclysm—no sudden deprivation of all timber products. There will always be lumber in our markets, but if the price is beyond the reach of the average American, it might as well not be there, as far as he is concerned. More idle lands, more idle men, less home ownership, and the slow throttling of demand for lumber by the rising tide of prices will be the evidence of our failure to restore the forests.

Timber is essential to national life of the standard which Americans demand. In peace or war it is a form of wealth the possession of which is partial assurance of success; the lack of which will be found a heavy handicap. Therefore as a measure of self-preservation such steps must be taken as will assure the national supply.

Forest culture in the United States is inevitable. Price pressure will attend to that. Once our house is put in order, timber will no longer be the volunteer product of the public domain, but a crop, planted, tended, and cut as regularly as those of the farms. It may never again be as plentiful or as cheap as in the past, but after awhile there will be enough, and perhaps some to spare for less fortunate

countries. Thus, muddling through in Anglo-Saxon fashion, we shall finally bridge the gap between the pioneer methods of the past and scientific use of forest lands.

It is by no means a cheerless future that lies before us. On the contrary, it is full of promise—after the pinch is past. It means restoration instead of destruction. It means permanence of the lumber industry instead of sawmills wandering from end to end of the country. It means the steady flow of national wealth from the

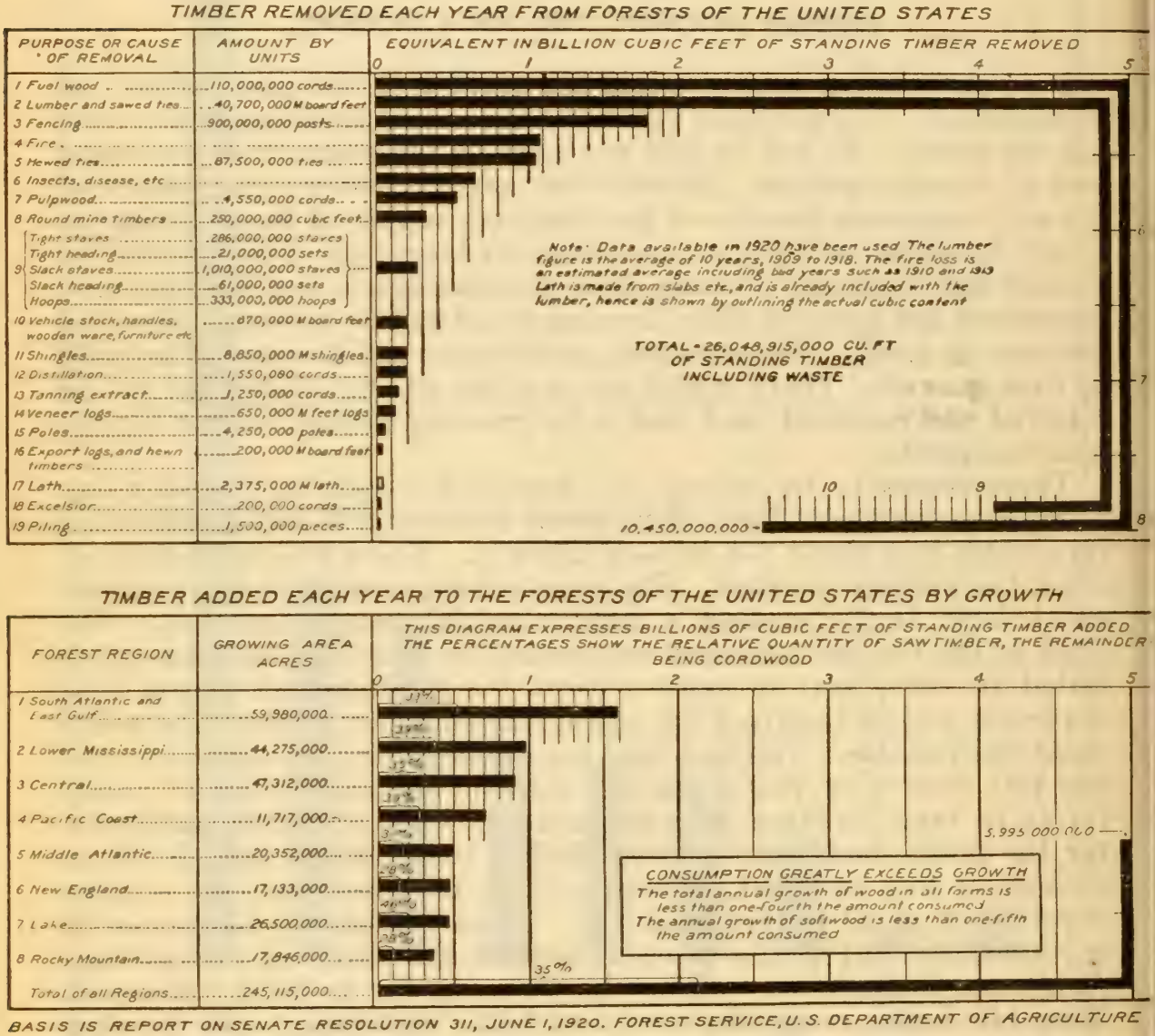
TIMBER REMOVED EACH YEAR FROM FORESTS OF THE UNITED STATES
PURPOSE OR CAUSE OF REMOVAL
AMOUNT BY UNITS
EQUIVALENT IN BILLION CUBIC FEET OF STANDING TIMBER REMOVED
0 1 2 3 4 5
1 Fuel wood ..... 110,000,000 cords
2 Lumber and sawed ties ..... 40,700,000 M board feet
3 Fencing ..... 900,000,000 posts
4 Fire .....
5 Hewed ties ..... 87,500,000 ties
6 Insects, disease, etc .....
7 Pulpwood ..... 4,550,000 cords
8 Round mine timbers ..... 250,000,000 cubic feet
9 Tight staves ..... 286,000,000 staves
Tight heading ..... 21,000,000 sets
Slack staves ..... 1,010,000,000 staves
Slack heading ..... 61,000,000 sets
Hoops ..... 333,000,000 hoops
10 Vehicle stock, handles, wooden ware, furniture etc ..... 870,000 M board feet
11 Shingles ..... 8,850,000 M shingles
12 Distillation ..... 1,550,000 cords
13 Tanning extract ..... 1,250,000 cords
14 Veneer logs ..... 650,000 M feet logs
15 Poles ..... 4,250,000 poles
16 Export logs, and hewn timbers ..... 200,000 M board feet
17 Lath ..... 2,375,000 M lath
18 Excelsior ..... 200,000 cords
19 Piling ..... 1,500,000 pieces
Note: Data available in 1920 have been used. The lumber figure is the average of 10 years, 1909 to 1918. The fire loss is an estimated average including bad years such as 1910 and 1913. Lath is made from slabs etc., and is already included with the lumber, hence is shown by outlining the actual cubic content
TOTAL - 26,048,915,000 CU. FT OF STANDING TIMBER INCLUDING WASTE
10,450,000,000
10
9
6
7
8
TIMBER ADDED EACH YEAR TO THE FORESTS OF THE UNITED STATES BY GROWTH
FOREST REGION
GROWING AREA ACRES
THIS DIAGRAM EXPRESSES BILLIONS OF CUBIC FEET OF STANDING TIMBER ADDED
THE PERCENTAGES SHOW THE RELATIVE QUANTITY OF SAWTIMBER, THE REMAINDER BEING CORDWOOD
0 1 2 3 4 5
1 South Atlantic and East Gulf 59,980,000
2 Lower Mississippi 44,275,000
3 Central 47,312,000
4 Pacific Coast 11,717,000
5 Middle Atlantic 20,352,000
6 New England 17,133,000
7 Lake 26,500,000
8 Rocky Mountain 17,846,000
Total of all Regions 245,115,000
35%
5,995,000,000
CONSUMPTION GREATLY EXCEEDS GROWTH
The total annual growth of wood in all forms is less than one-fourth the amount consumed
The annual growth of softwood is less than one-fifth the amount consumed
BASIS IS REPORT ON SENATE RESOLUTION 311, JUNE 1, 1920. FOREST SERVICE, U. S. DEPARTMENT OF AGRICULTURE

FIG. 12.—Only 35 per cent of the wood now growing is fit for lumber. The volunteer crop of untended and fire-swept forests naturally can not equal the product of intelligent management.

great areas now treeless which once nourished the magnificent forests of the past. It guarantees work as essential and constructive as that of the farmer, with steady wages for hundreds of thousands of men. For many it will prove an opening door of opportunity to get away from the cities and back to the land. The secondary industries which would spring up would provide work, wages, and prosperity for additional hundreds of thousands of skilled artisans. A dozen Governments of Europe would eagerly embrace such an opportunity to provide happy and healthful occupations for the unemployed, and utilize waste lands so fortunately located with respect to climatic conditions that they are capable of growing the most valuable forest

products of the world. The need is plain. With every passing year it becomes more urgent, for timber is the slowest of all crops to mature, and the mills are cutting four trees for every one restored.

The task is great. Yet the obstacles are not insurmountable. On the other hand, there is not much latitude of choice, for America must have timber, and the only way to get the amount needed is to grow it. Our timber supply and our wheat supply stand in the same category. There is no doubt that whatever may be necessary to insure the continued growing of wheat will be done. The restoration of American forests awaits only the impulse of a clean-cut public conviction that timber is essential and that a new crop must be grown.

PART II. STATISTICS OF PRODUCTION AND VALUE.

TOTAL LUMBER PRODUCTION.

The quantity of lumber reported cut in 1920 by 15,978 mills was 29,878,360,000 board feet. The output of 2,668 mills cutting less than 50,000 board feet each is not included in the reported cut. In addition, 2,483 mills were reported idle.

The estimated total lumber production was 33,800,000,000 feet board measure. This is a decrease in production of 2.2 per cent from the 1919 figures of the Bureau of the Census and 27 per cent less than the estimated peak of production in 1907. The computed number of mills operating (23,242) is less than half the number canvassed by the Bureau of the Census in 1909.

The reported lumber cut, the number of active mills reporting, and the estimated annual total cut are given in Table 1 for each year since 1899 for which data have been compiled. The statistics are not directly comparable for all of the years, since the intensiveness of the canvass made in different years must be taken into consideration. In the enumerations for 1899, 1909, and 1919 field agents of the Bureau of the Census were employed which permitted the tabulation of the output of practically all mills from direct reports.

TABLE 1.—*Quantity of lumber reported, number of active sawmills reporting, and estimated total cut, 1899 and 1904–1920.*

Year.	Reported cut of lumber.	Active mills reporting.	Estimated total cut of lumber.
	M feet b. m.		*M feet b. m.*
1899	35,084,166	31,833	35,084,166
1904 [1]	34,135,139	[2] 18,277	43,000,000
1905	30,502,961	11,666	43,500,000
1906	37,550,736	22,398	46,000,000
1907 [3]	40,256,154	28,850	46,000,000
1908 [3]	33,224,369	31,231	42,000,000
1909	44,509,761	[4] 46,584	44,509,761
1910 [3]	40,018,282	[2] 31,934	44,500,000
1911 [3]	37,003,207	[2] 28,107	43,000,000
1912	39,158,414	[2] 29,005	45,000,000
1913	38,387,009	[2] 21,668	44,000,000
1914 [1]	37,346,023	[2] 27,506	40,500,000
1915	31,241,734	[2] 16,815	38,000,000
1916	34,791,385	[2] 17,269	40,000,000
1917	33,192,911	[2] 16,420	36,000,000
1918	29,362,020	[2] 14,753	32,000,000
1919	34,552,076	[5] 29,534	34,552,076
1920	29,878,360	[2] 15,978	33,800,000

[1] Custom mills excluded.
[2] Mills cutting under 50 M feet excluded.
[3] Including mills which manufacture lath and shingles exclusively (1,500 estimated).
[4] Includes 4,543 mills cutting less than 50 M feet, and all cooperage, veneer, millwork, box, furniture, and other factories cutting any lumber at all in 1909.
[5] Includes custom mills and 2,655 mills cutting under 50 M each.

LUMBER PRODUCTION BY CLASSES OF MILLS.

As in previous years, the mills were arbitrarily divided into classes according to the quantity reported cut. These classes are shown in Table 2, with the computed [6] number of mills operating and the

[6] "Computed," as used in this bulletin, expresses results obtained by the extension of figures based on actual returns, so as to show totals for approximately all sawmills, whether or not reports were received from them.

computed total production of each of the last six years, 1915 to 1920, inclusive.

The striking difference in size between Class 5 and Class 1 mills as illustrated in Plate I and Plate II, respectively, helps to explain why it is that more than two-thirds of the aggregate output of American sawmills was produced by 1,302 mills, or only 5.6 per cent of the 23,242 computed to have been in operation. The percentage of the cut produced by the class of mills cutting 10,000,000 feet and over annually (class 5) has increased materially during the last 12 years. In 1909 this class of mills produced 43.09 per cent of the total cut for the year, while in 1920 the same class of mills cut 57.59 per cent of the total. But in general, for the last six years the proportional production by the five mill classes has changed but little.

TABLE 2.—*Reported production of lumber, 1919, and computed totals 1915 to 1918, and 1920, by classes of mills.*

Classes.	Mills.		Computed quantity cut.	
	Computed number operating.	Per cent.	M feet b. m.	Per cent.
All classes:				
1915	29,951	100.00	37,011,656	100.00
1916	30,081	100.00	39,807,251	100.00
1917	24,815	100.00	35,831,239	100.00
1918	22,546	100.00	31,890,494	100.00
1919[1]	29,534	100.00	34,552,076	100.00
1920	23,242	100.00	33,798,800	100.00
Class 5; 10,000 M feet and over per year:				
1915	846	2.82	20,669,746	55.84
1916	925	3.08	23,310,137	58.56
1917	899	3.62	22,148,570	61.81
1918	785	3.48	18,970,552	59.49
1919[1]	792	2.68	18,814,099	54.45
1920	795	3.42	19,466,600	57.59
Class 4; 5,000 M feet to 9,999 M feet per year:				
1915	453	1.51	3,224,448	8.71
1916	484	1.61	3,513,767	8.82
1917	459	1.85	3,360,502	9.38
1918	505	2.24	3,567,104	11.19
1919[1]	503	1.70	3,544,609	10.26
1920	507	2.18	3,589,600	10.62
Class 3; 1,000 M to 4,999 M feet per year:				
1915	3,191	10.66	6,201,864	16.76
1916	3,041	10.11	5,858,675	14.72
1917	2,352	9.48	4,615,941	12.88
1918	2,194	9.73	4,270,755	13.39
1919[1]	3,211	10.87	5,972,196	17.28
1920	2,730	11.75	5,305,900	15.70
Class 2; 500 M to 999 M feet per year:				
1915	4,198	14.02	2,941,264	7.95
1916	4,594	15.27	3,096,760	7.78
1917	3,689	14.87	2,460,685	6.87
1918	3,183	14.12	2,138,005	6.70
1919[1]	3,977	13.47	2,662,855	7.71
1920	3,503	15.07	2,341,200	6.93
Class 1; 50 M to 499 M feet per year:				
1915	21,263	70.99	3,974,334	10.74
1916	21,037	69.93	4,027,912	10.12
1917	17,416	70.18	3,245,541	9.06
1918	15,879	70.43	2,944,078	9.23
1919[1]	18,396	62.29	3,473,750	10.05
1920	15,707	67.58	3,095,500	9.16

[1] The data shown for 1919 is quantity actually reported cut, and the total for all classes includes 2,655 mills or 8.99 per cent cutting under 50 M feet, each reporting a total quantity of 84,567 M feet of 0.25 per cent.

Table 3 shows the reported cut in each State arranged by mill classes. The 764 Class 5 mills reporting accounted for 63 per cent of the total reported cut. Of the Class 5 mills 286 are located in the Pacific group of States. This is an increase of 44 mills, or 18 per cent since the enumeration by the census in 1919.

The Lake States show a reduction of 11 Class 5 mills, or 12 per cent since 1919, although the number in Wisconsin increased. The principal reduction was in Michigan. Some mills formerly rated in Class 5, now appear in Class 4 through reduction of their output.

The indication in the South are that one-eighth or more of the Class 5 mills either cut out in 1920 or reduced their cut to the Class 4 limits. The situation in the South was so unfavorable in 1920 that fully dependable deductions can not be made. The reports for 1921 should reveal to what extent the productive capacity of the South has been reduced.

TABLE 3.—*Sawmills classified according to reported quantity of lumber cut, by States, 1920.*

State.	Aggregate.		Class 5 (mills cutting over 10,000 M feet).		Class 4 (mills cutting from 5,000 M to 9,999 M feet).		Class 3 (mills cutting from 1,000 M to 4,999 M feet).		Class 2 (mills cutting from 500 M to 999 M feet).		Class 1 (mills cutting from 50 M to 499 M feet).	
	Number of active mills reporting.	Quantity M feet b. m.	Number.	Quantity M feet b. m.	Number.	Quantity M feet b. m.	Number.	Quantity M feet b. m.	Number.	Quantity M feet b. m.	Number.	Quantity M feet b. m.
United States	15,978	29,878,360	764	18,764,968	466	3,295,672	2,114	4,222,552	2,381	1,595,346	10,253	1,999,822
Alabama	903	1,108,188	22	428,102	26	173,715	173	304,331	157	104,693	525	97,347
Arizona	20	120,495	5	114,940	.....	.....	1	.....	1	.....	13	[1] 5,555
Arkansas	656	1,148,158	32	623,690	25	190,390	102	194,744	106	70,099	391	69,235
California and Nevada	495	1,482,102	40	[2] 1,263,053	9	61,725	53	123,870	28	18,914	65	[2] 14,540
Colorado	151	67,847	.....	.....	1	.....	19	[3] 37,392	18	11,726	113	18,729
Connecticut	122	44,996	.....	.....	.....	.....	6	8,225	26	19,354	90	17,417
Delaware	34	11,990	.....	.....	.....	.....	4	5,160	3	1,500	27	5,330
Florida	204	863,013	28	562,048	17	123,451	67	144,042	28	19,521	64	13,951
Georgia	713	599,739	8	145,564	20	130,755	97	153,893	140	91,816	448	77,711
Idaho	188	969,576	23	840,441	6	43,969	23	48,489	28	18,579	108	18,098
Illinois	129	44,469	.....	.....	1	.....	7	[3] 18,372	12	7,729	109	18,368
Indiana	404	210,045	.....	.....	2	.....	54	[4] 117,785	50	33,753	298	58,507
Iowa	53	12,617	.....	.....	.....	.....	2	.....	3	[5] 5,835	48	6,782
Kansas and Nebraska	5	4,245	.....	.....	.....	.....	2	.....	.....	.....	3	[5] [6] 4,245
Kentucky	558	270,882	3	42,311	7	50,793	25	54,260	61	39,467	462	84,051
Louisiana	271	2,719,761	85	2,242,500	42	304,162	55	140,812	28	18,848	61	13,439
Maine	441	450,196	4	69,032	13	84,676	113	194,465	76	51,749	235	50,274
Maryland	221	65,202	.....	.....	1	.....	9	[3] 16,295	25	17,128	186	31,779
Massachusetts	191	100,266	.....	.....	1	.....	32	[3] 52,007	34	22,107	124	26,152
Michigan	243	726,147	19	296,268	41	303,274	34	88,297	22	14,483	127	23,825
Minnesota	246	556,265	14	409,860	10	67,466	15	34,915	14	9,125	193	34,899
Mississippi	648	1,677,469	48	1,075,267	31	218,547	116	240,151	111	74,121	342	69,383
Missouri	405	231,361	3	38,273	5	40,715	36	66,594	42	30,515	319	55,264
Montana	124	409,667	8	309,225	1	.....	31	[3] 81,427	8	6,426	76	12,589
New Hampshire	223	223,376	1	.....	2	.....	84	[7] 171,101	46	32,618	90	19,657

[1] Includes the cut of 1 mill in class 3 and 1 mill in class 2.
[2] Includes the cut of 1 mill in Nevada.
[3] Includes the cut of 1 mill in class 4.
[4] Includes the cut of 2 mills in class 4.
[5] Includes the cut of 2 mills in class 3.
[6] Includes the cut of 2 mills in Nebraska.
[7] Includes the cut of 1 mill in class 5 and 2 mills in class 4.

TABLE 3.—*Sawmills classified according to reported quantity of lumber cut, by States, 1920*—Continued.

State.	Aggregate.		Class 5 (mills cutting over 10,000 M feet).		Class 4 (mills cutting from 5,000 M to 9,999 M feet).		Class 3 (mills cutting from 1,000 M to 4,999 M feet).		Class 2 (mills cutting from 500 M to 999 M feet).		Class 1 (mills cutting from 50 M to 499 M feet).	
	Number of active mills reporting.	Quantity M feet b. m.	Number.	Quantity M feet b. m.	Number.	Quantity M feet b. m.	Number.	Quantity M feet b. m.	Number.	Quantity M feet b. m.	Number.	Quantity M feet b. m.
New Jersey	74	16,466	.....	.....	.....	.....	.....	.....	8	5,427	66	11,039
New Mexico	60	109,882	5	77190	2	.....	5	[4] 21,929	5	3,571	43	7,192
New York	1,206	410,909	3	37,669	4	33,101	38	70,448	144	95,381	1,017	174,310
North Carolina	1,215	786,412	10	123,237	17	122,520	136	253,211	197	126,819	855	160,625
Ohio	473	185,881	1	.....	.....	.....	25	[8] 57,750	78	53,123	369	75,008
Oklahoma	78	154,598	5	118,581	.....	.....	11	20,340	9	5,779	53	9,898
Oregon	659	3,316,098	82	2,531,117	37	249,434	185	413,817	103	69,050	252	52,680
Pennsylvania	832	401,660	6	121,253	5	43,542	22	34,568	98	67,147	701	135,150
Rhode Island	19	7,489	.....	.....	.....	.....	1	.....	6	[9] 4,584	12	2,905
South Carolina	368	520,210	16	272,787	12	79,630	48	91,995	57	38,474	235	37,324
South Dakota	44	45,033	1	.....	.....	.....	4	[8] 33,803	8	5,168	31	6,062
Tennessee	609	554,991	6	82,072	15	104,669	67	139,109	129	86,352	392	142,789
Texas	232	1,177,436	42	943,728	9	66,799	55	123,636	39	25,256	87	18,017
Utah	58	7,591	.....	.....	.....	.....	.....	.....	1	.....	57	[10] 7,591
Vermont	265	114,601	.....	.....	.....	.....	18	29,280	63	44,249	184	41,072
Virginia	1,065	735,729	13	219,333	15	107,879	81	120,997	206	138,666	750	148,854
Washington	584	5,524,509	164	4,685,418	44	314,282	187	453,905	64	42,223	125	28,681
West Virginia	398	647,055	19	319,962	22	157,015	34	72,088	68	45,601	255	52,389
Wisconsin	350	1,036,550	48	720,249	23	158,488	37	94,161	29	20,167	213	43,485
Wyoming	41	7,188	.....	.....	.....	.....	.....	.....	2	.....	39	[11] 7,188

[4] Includes the cut of 2 mills in class 4.
[8] Includes the cut of 1 mill in class 5.
[9] Includes the cut of 1 mill in class 3.
[10] Include the cut of 1 mill in class 2.
[11] Includes the cut of 2 mills in class 2.

LUMBER PRODUCTION BY STATES AND GROUPS.

Table 4 shows the total quantity of lumber cut in each State for every year in which an enumeration was made, from 1870 to 1920, inclusive. The rank of the leading 25 States in each year is indicated.

The figures accurately portray the fluctuations in the lumber industry for the period of 50 years covered. In 1920, with the single exception of New York, all of the 12 States showing an increase of production were west of the Great Plains. Even in the Rocky Mountains, Colorado, Nevada, Utah, and Wyoming are well past the peak of their production.

By groups of States the relative increases and decreases as compared with 1919 were as follows:

Group.	Increase per cent.	Decrease per cent.
Rocky Mountain	31	.....
Pacific	17	.....
Northeastern	.....	15
North Carolina pine	.....	15
Lake	.....	11
Southern pine	.....	10
Central	.....	9

The most remarkable increases took place in the Pacific group and the Inland Empire, which, together, cut 1,630,000,000 feet more than in 1919. Washington increased 11 per cent, Oregon 29 per cent, California (and Nevada) 18 per cent, Idaho 27 per cent, and Montana 43 per cent. Arizona shows 64 per cent increase and New Mexico 29 per cent.

In the Lake States Minnesota showed the greatest proportional decrease, with 18 per cent. In the North Carolina pine group North Carolina's output diminished 25 per cent. In the southern pine group the heaviest decreases were: In Alabama, 20 per cent; Arkansas, 18 per cent; Georgia, 15 per cent; and Florida, 12 per cent. Lousiana lost but 1 per cent. The heavy decrease in the South is attributed, in part at least, to the extremely unfavorable weather conditions, but taken in connection with the apparent decrease in the number of large mills it is at least a strong indication of a continuous decline.

TABLE 4.—*Production of lum*

[Reported quantities for each period known, except 1915–1918 and 1920, for

State.	1870		1880		1890		1899		1904	
	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).
United States	....	12,755,543	....	18,091,356	....	[1] 23,497,653	....	[2] 34,787,084	....	[1] 34,135,139
Alabama	....	97,192	20	251,851	9	586,143	12	1,096,539	11	1,243,988
Arizona	....	1,200	....	10,715	....	5,300	....	36,182	....	55,601
Arkansas	....	78,692	....	172,503	14	526,091	5	1,595,933	8	1,680,536
California	10	318,817	17	304,795	15	515,823	22	734,232	13	1,077,499
Colorado	....	13,625	....	63,792	....	79,906	....	133,746	....	141,914
Connecticut	....	56,482	....	64,427	....	48,277	....	107,594	....	69,376
Delaware	....	18,858	....	31,572	....	23,152	....	35,395	....	30,416
Florida	19	158,524	21	247,627	21	411,436	18	788,905	18	812,693
Georgia	13	245,141	9	451,788	10	572,970	7	1,308,610	12	1,135,910
Idaho	....	1,490	....	18,204	....	27,800	....	65,331	....	211,447
Illinois	12	245,910	12	334,244	....	218,938	....	381,584	....	211,545
Indiana	5	656,400	5	915,943	8	707,115	13	977,878	23	563,853
Iowa	9	325,285	10	412,578	11	568,816	....	351,769	....	281,521
Kansas	....	74,163	....	45,281	....	4,037	....	10,645	....	2,120
Kentucky	15	214,074	16	305,684	20	420,820	21	765,343	21	586,371
Louisiana	....	76,459	....	133,472	25	303,591	11	1,113,423	3	2,459,327
Maine	6	639,167	7	566,656	12	564,243	19	756,515	16	863,860
Maryland	....	96,165	....	[8] 127,336	....	81,078	....	183,393	....	166,469
Massachusetts	17	197,377	23	205,244	....	208,655	....	342,058	....	262,467
Michigan	1	2,251,613	1	4,172,572	1	4,245,717	2	3,012,057	4	2,006,670
Minnesota	14	242,390	8	563,974	4	1,079,403	3	2,341,619	5	1,942,248
Mississippi	18	160,584	....	168,747	17	452,797	10	1,202,334	7	1,727,391
Missouri	8	329,676	11	399,744	23	395,755	24	715,968	24	553,940
Montana	....	12,571	....	21,420	....	89,511	....	255,685	....	236,430
Nebraska	....	13,824	....	13,585	....	8,556	....	4,655	....	1,862
Nevada	....	35,025	....	21,545	....	.....	....	725	....	[5]
New Hampshire	11	253,434	19	292,267	....	266,890	25	562,258	25	491,591
New Jersey	24	101,829	....	109,679	....	32,285	....	72,660	....	44,058
New Mexico	....	6,909	....	11,195	....	26,112	....	30,880	....	81,113
New York	3	1,310,066	4	1,184,220	6	909,990	17	874,754	22	581,976
North Carolina	22	124,938	22	241,822	16	509,436	8	1,278,399	10	1,318,411
Ohio	7	557,237	6	910,832	13	541,076	14	957,239	....	420,905
Oklahoma	....	.....	....	.....	....	2,552	....	22,055	....	[5]
Oregon	....	75,193	....	177,171	19	444,565	23	734,181	14	987,107
Pennsylvania	2	1,629,631	2	1,733,844	3	2,113,267	4	2,321,284	6	1,738,972
Rhode Island	....	12,732	....	8,469	....	7,620	....	18,265	....	15,398
South Carolina	....	95,098	24	185,772	....	197,940	....	466,109	20	609,769
South Dakota	....	3,894	....	29,286	....	[12] 28,231	....	[12] 33,734	....	13,705
Tennessee	16	204,751	18	302,673	18	450,097	16	939,463	19	775,885
Texas	23	106,897	13	328,968	7	839,724	9	1,230,904	9	1,406,473
Utah	....	19,741	....	25,709	....	14,295	....	17,484	....	12,630
Vermont	15	241,687	14	322,942	24	370,155	....	365,869	....	337,238
Virginia	20	144,225	15	315,959	22	409,804	15	956,169	15	949,797
Washington	21	128,743	....	160,176	5	1,061,560	6	1,428,205	2	2,485,628
West Virginia	....	76,375	25	180,112	....	299,709	20	773,583	17	855,889
Wisconsin	4	1,098,199	3	1,542,021	2	2,817,200	1	3,361,943	1	2,623,157
Wyoming	....	3,260	....	2,960	....	6,415	....	16,957	....	7,990
All other	....	.....	....	.....	....	[13] 2,800	....	[13] 6,571	....	[14] 51,993
State groups:										
Northeastern	1	4,557,428	2	4,642,656	2	4,625,612	3	5,640,045	3	4,601,821
Central	3	2,284,423	3	3,349,232	4	3,033,510	4	5,511,058	5	3,968,388
Southern	4	923,489	4	1,754,956	3	3,693,304	2	8,358,703	1	10,466,318
North Carolina pine	7	364,261	5	743,533	6	1,117,180	6	2,700,677	6	2,877,977
Lake	2	3,592,202	1	6,278,567	1	8,144,320	1	8,715,619	2	6,572,075
Pacific	5	557,778	6	663,687	5	2,021,948	5	2,897,343	4	4,550,234
Rocky Mountain	8	58,796	8	153,995	8	249,339	7	556,265	7	747,125
All other	6	417,166	7	504,730	7	612,440	8	407,374	8	351,201

[1] Excludes custom mills (sawing 3,196,527 M feet in 1890).
[2] Includes both merchant and custom sawing.
[3] Mills cutting less than 50 M feet each per year excluded.
[5] Included in "all other."
[7] Includes cut of mills in Nebraska.
[8] Includes cut of mills in District of Columbia.
[9] Included with Kansas.
[10] Reported as cut of Indian Territory

ber by States; 1870 to 1920.

which years computed quantities are given, with rank of leading 25 States.]

1905		1906		1907		1908		1909		1910	
Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).
....	30,502,961	....	37,550,736	....	40,256,154	....	33,224,369	....	44,509,761	....	[2] 40,018,282
13	843,897	15	1,009,783	15	1,224,967	12	1,152,079	11	1,691,001	11	1,465,623
....	[5]	....	54,960	....	72,134	....	43,287	....	62,731	....	72,655
6	1,488,589	6	1,839,368	6	1,988,504	4	1,656,991	5	2,111,300	7	1,844,446
11	1,061,608	11	1,348,559	14	1,345,943	15	996,115	18	1,143,507	14	1,254,826
....	56,753	....	110,212	....	134,239	....	117,036	....	141,710	....	121,398
....	69,845	....	124,880	....	140,011	....	137,855	....	168,371	....	126,463
....	12,260	....	44,487	....	50,892	....	41,184	....	55,440	....	46,642
19	658,007	17	888,137	21	839,058	20	730,906	17	1,201,734	18	992,091
17	712,604	18	831,675	19	853,697	17	904,668	15	1,342,249	16	1,041,617
....	212,725	....	418,944	....	513,788	24	518,625	25	645,800	21	745,984
....	119,065	....	141,374	....	141,317	....	123,319	....	170,181	....	113,506
24	352,362	25	447,808	....	504,790	....	411,868	....	556,418	....	422,963
....	129,472	....	163,747	....	144,271	....	97,242	....	132,021	....	75,446
....	[7] 1,272	....	[5]	....	[5]	....	[5]	....	4,716	....	639
22	464,676	20	661,299	17	912,908	21	658,539	21	860,712	20	753,556
3	2,293,809	2	2,796,395	2	2,972,119	2	2,722,421	2	3,551,918	2	3,733,900
15	745,705	13	1,088,747	16	1,103,808	16	929,350	19	1,111,565	19	860,273
....	163,749	....	219,098	....	213,786	....	168,534	....	267,939	....	154,554
....	252,804	....	354,483	....	364,231	....	384,526	....	361,200	....	239,206
5	1,719,687	4	2,094,279	7	1,827,685	7	1,478,252	10	1,889,724	9	1,681,081
4	1,925,804	7	1,794,144	9	1,660,716	9	1,286,122	12	1,561,508	12	1,457,734
8	1,299,300	5	1,840,250	4	2,094,485	3	1,861,016	3	2,572,669	3	2,122,205
23	362,217	24	507,084	24	548,774	....	458,938	23	660,159	24	501,691
....	189,291	....	328,727	....	343,814	....	311,533	....	308,582	....	319,089
....	[9]	....		....		....		....	[5]	....	[5]
....	[5]	....		....	[5]	....	[5]	....	[5]	....	[5]
25	340,727	23	539,259	22	754,023	22	606,760	24	649,606	....	443,907
....	17,704	....	36,253	....	39,942	....	34,930	....	61,620	....	36,542
....	[5]	....	103,079	....	113,204	....	79,439	....	91,987	....	83,544
14	750,280	19	810,949	20	848,894	19	781,391	22	681,440	23	506,074
10	1,080,602	12	1,222,974	11	1,622,387	13	1,136,796	4	2,177,715	8	1,824,722
....	331,552	....	438,775	25	529,087	25	459,259	....	542,904	25	490,039
....	11,667	....	[10] 48,694	....	140,015	....	158,756	....	225,730	....	164,663
9	1,262,610	10	1,604,894	10	1,635,563	8	1,468,158	9	1,898,995	4	2,084,633
7	1,397,164	9	1,620,881	8	1,734,729	10	1,203,041	14	1,462,771	15	1,241,199
....	14,054	....	21,528	....	32,855	....	30,528	....	25,489	....	14,392
21	466,478	22	566,928	23	649,058	23	560,888	20	897,660	22	706,831
....	11,502	....	22,634	....	34,841	....	25,859	....	31,057	....	16,340
20	540,920	21	634,587	18	894,968	18	790,642	16	1,223,849	17	1,016,475
12	929,363	8	1,741,473	3	2,229,590	6	1,524,008	7	2,099,130	6	1,884,184
....	3,618	....	7,768	....	14,690	....	15,059	....	12,638	....	11,786
....	266,676	....	329,422	....	373,660	....	304,017	....	351,571	....	284,815
16	715,197	14	1,063,241	12	1,412,477	11	1,198,725	6	2,101,716	10	1,652,192
1	3,917,166	1	4,305,053	1	3,777,606	1	2,915,928	1	3,862,916	1	4,097,492
18	672,902	16	976,173	13	1,395,979	14	1,097,015	13	1,472,942	13	1,376,737
2	2,543,503	3	2,331,305	5	2,003,279	5	1,613,315	8	2,025,038	5	1,891,291
....	4,360	....	13,213	....	17,479	....	18,822	....	28,602	....	30,931
....	[15] 88,825	....	[16] 1,213	....	[17] 5,891	....	[17] 10,627	....	[18] 11,230	....	[18] 11,955
4	4,030,968	4	5,189,987	3	5,656,831	3	4,622,116	5	5,197,012	6	3,954,067
5	2,843,694	5	3,807,100	6	4,327,823	5	3,999,580	3	5,487,165	4	4,674,967
1	8,226,159	1	10,947,081	1	12,342,435	1	10,710,845	1	14,795,731	1	13,248,679
6	2,262,277	6	2,853,143	5	3,683,922	6	2,896,400	6	5,177,091	5	4,183,745
3	6,188,994	3	6,219,728	4	5,491,680	4	4,377,689	4	5,476,270	3	5,080,106
2	6,241,384	2	7,258,506	2	6,759,112	2	5,380,201	2	6,905,418	2	7,436,951
7	466,747	7	1,038,903	7	1,209,348	7	1,103,801	7	1,292,050	7	1,385,387
8	242,738	8	236,288	8	185,003	8	133,728	8	179,024	8	104,380

[12] Includes cut of mills in North Dakota.
[13] Reported as the cut of Alaska.
[14] Includes cut of Alaska, Nevada, and Oklahoma.
[15] Includes cut of Arizona, Nevada, and New Mexico.
[16] Includes cut of Kansas and a part of Oklahoma
[17] Includes cut of Kansas and Nevada.
[18] Includes cut of Nebraska and Nevada

TABLE 4.—*Production of lumber*

State.	1911		1912		1913		1914	
	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank	Quantity (M feet).	Rank.	Quantity (M feet).
United States	.....	[3] 37,003,207	.....	[3] 39,158,414	.....	[3] 38,387,009	.....	[13] 37,346,023
Alabama	13	1,226,212	12	1,378,151	8	1,523,936	8	1,494,732
Arizona	.....	73,139	.....	76,287	.....	77,363	.....	78,667
Arkansas	6	1,777,303	7	1,821,811	7	1,911,647	6	1,796,780
California	14	1,207,561	14	1,203,059	13	1,183.380	12	1,303,183
Colorado	.....	95,908	.....	88,451	.....	74,602	.....	102,117
Connecticut	.....	124,661	.....	109,251	.....	93,730	.....	81,883
Delaware	.....	23,853	.....	28,285	.....	18,039	.....	25,517
Florida	16	983,824	15	1,067,525	15	1,055,047	15,	1,073,821
Georgia	19	801,611	17	941,291	17	844,284	16	1,026,191
Idaho	20	765,670	21	713,575	21	652,616	20	763,508
Illinois	.....	96,651	.....	122,528	.....	102,902	.....	66,227
Indiana	.....	360,613	.....	401,017	.....	332,993	.....	298,571
Iowa	.....	59,974	.....	46,593	.....	21,676	.....	11,443
Kansas	.....	[5]	.....	[5]	.....	[5]	.....	[5]
Kentucky	21	632,415	22	641,296	22	541.531	22	596,392
Louisiana	2	3,566,456	2	3,876,211	2	4,161,560	1	3,956,434
Maine	18	828,417	19	882,128	18	834,673	17	992,594
Maryland	.....	144,078	.....	174,320	.....	140,469	.....	162,097
Massachusetts	.....	273,317	.....	259,329	.....	224,580	.....	143,094
Michigan	10	1,466,754	10	1,488,827	12	1,222,983	13	1,214,435
Minnesota	9	1,485,015	11	1,436,726	14	1,149,704	11	1,312,230
Mississippi	3	2,041,615	3	2,381,893	3	2,610,581	3	2,280,966
Missouri	25	418,586	.....	422,470	24	416,608	25	370,571
Montana	.....	228.416	.....	272,174	.....	357,974	.....	317,842
Nebraska	.....	[5]	.....	[5]	.....	[5]	.....	[5]
Nevada	.....	[5]	.....	[5]	.....	[5]	.....	[5]
New Hampshire	.....	388,619	25	479,499	.....	309,424	24	482,744
New Jersey	.....	28,639	.....	34,810	.....	27,248	.....	48,748
New Mexico	.....	83,728	.....	82,650	.....	65,818	.....	57,167
New York	23	526,283	23	502,351	23	457,720	23	486,195
North Carolina	5	1,798,724	4	2,193,308	6	1.957,258	4	2,227,851
Ohio	24	427,161	24	499 834	25	414,943	.....	286,063
Oklahoma	.....	143,869	.....	168,806	.....	140,284	.....	200,594
Oregon	4	1,803,698	5	1,916,160	4	2,098,467	5	1,817,875
Pennsylvania	15	1,048,606	16	992,180	19	781,547	19	864,710
Rhode Island	.....	9,016	.....	14,421	.....	14,984	.....	15,902
South Carolina	22	584,872	20	816,930	20	752,184	21	701,540
South Dakota	.....	13,046	.....	20,986	.....	19,103	.....	18,744
Tennessee	17	914,579	18	932,572	16	872,311	18	885,035
Texas	8	1,681,080	6	1,902,201	5	2,081,471	7	1,554,005
Utah	.....	10,573	.....	9,055	.....	5,403	.....	8,680
Vermont	.....	239,254	.....	235,983	.....	194,647	.....	249,608
Virginia	12	1,359,790	8	1,569,997	10	1,273,953	9	1,488,070
Washington	1	4,064,754	1	4,099,775	1	4,592,053	2	3,946,189
West Virginia	11	1,387,786	13	1,318,732	11	1,249,559	14	1,118,480
Wisonsin	7	1,761,986	9	1,498,876	9	1,493,353	10	1,391,001
Wyoming	.....	33,309	.....	13,560	.....	12,940	.....	11,852
All other	.....	[19] 11,786	.....	[19] 22,525	.....	[19] 19,461	.....	[19] 15,672
State groups:								
Northeastern	6	3,634,743	6	3,712,557	6	3,097,061	6	3,553,092
Central	4	4,237,791	5	4,338,449	4	3,930,847	5	3,621,339
Southern	1	12,221,970	1	13,537,894	1	14,328,810	1	13,383,523
North Carolina pine	5	3,743,386	3	4,580,235	3	3,983,395	3	4,417,464
Lake	3	4,713,755	4	4,424,429	5	3,866,040	4	3,917,666
Pacific	2	7,076,013	2	7,218,994	2	7,873,900	2	7,067,247
Rocky Mountain	7	1,290,743	7	1,255,752	7	1,246,716	7	1,339,833
All other	8	84,806	8	90,104	8	60,240	8	45,859

[1] Excludes custom mills (sawing 3,196,527 M feet in 1890).
[2] Includes both merchant and custom sawing.
[3] Mills cutting less than 50 M feet each per year excluded.
[4] Includes 2,655 mills cutting less than 50 M feet each.
[5] Included in "all other."
[6] Includes cut of mills in Nevada.
[7] Includes cut of mills in Nebraska.
[8] Includes cut of mills in District of Columbia.
[9] Included with Kansas.
[11] Included with California.
[19] Includes cut of Kansas, Nebraska, and Nevada.

by States, 1870 to 1920—Continued.

1915		1916		1917		1918		1919		1920	
Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).
....	[3] 37,011,656	....	[3] 39,807,251	....	[3] 35,831,239	....	[3] 31,890,494	....	[24] 34,552,076	....	[3] 33,798,800
8	1,500,000	8	1,720,000	7	1,555,000	9	1,270,000	5	1,798,746	7	1,439,200
....	75,915	....	93,270	....	79,022	....	83,661	....	73,655	....	121,196
5	1,800,000	7	1,910,000	5	1,765,000	5	1,470,000	6	1,772,157	6	1,452,200
11	[6] 1,130,000	11	[6] 1,420,000	9	[6] 1,417,068	7	[6] 1,277,084	9	1,259,363	5	[6] 1,513,000
....	74,500	....	77,580	....	71,500	....	56,882	....	64,864	....	70,000
....	90,000	....	75,000	....	66,000	....	64,000	....	86,708	....	71,600
....	25,000	....	12,000	....	8,500	....	6,000	....	27,437	....	19,800
12	1,110,000	10	1,425,000	11	1,230,000	12	950,000	10	1,137,432	12	1,000,900
17	1,000,000	16	1,000,000	19	740,000	21	515,000	13	893,965	15	761,800
21	777,000	19	849,600	17	760,000	15	802,529	16	765,388	13	970,000
....	110,000	....	60,000	....	45,000	....	42,000	....	64,628	....	56,900
....	350,000	....	270,000	....	240,000	....	250,000	....	282,487	....	258,300
....	35,000	....	20,000	....	13,436	....	14,200	....	18,493	....	14,300
....	[3]	....	534	....	4,255	....	[7] 8,401	....	2,840	....	[7] 4,500
22	560,000	22	525,000	23	360,000	23	340,000	22	512,078	22	421,100
2	3,900,000	2	4,200,000	2	4,210,000	2	3,450,000	2	3,163,871	3	3,120,000
16	1,000,000	17	935,000	16	770,000	17	650,000	21	596,116	21	505,600
....	165,000	....	90,237	....	68,000	....	71,000	....	113,362	....	85,600
....	250,000	....	210,000	....	155,000	....	175,000	....	166,841	....	139,200
13	1,100,000	13	1,230,000	13	1,065,000	13	940,000	14	875,891	16	749,800
14	1,100,000	15	1,220,000	12	1,075,000	11	1,605,000	18	699,639	19	576,300
3	2,300,000	3	2,730,000	4	2,425,000	4	1,935,000	4	2,390,135	4	2,224,000
....	350,000	....	260,000	....	275,000	....	273,000	25	321,383	25	274,200
....	328,000	25	383,900	24	350,000	24	340,000	....	287,378	24	410,000
....	[3]	....	[3]	....	.....	....	[9]	....	505	....	[9]
....	[11]	....	[11]	....	[11]	....	[11]	....	20,335	....	[11]
23	500,000	24	385,000	25	290,000	22	350,000	24	338,777	....	248,600
....	45,000	....	40,000	....	25,000	....	19,500	....	36,888	....	23,300
....	65,787	....	91,600	....	93,000	....	88,915	....	86,808	....	112,240
24	475,000	23	400,000	22	360,000	25	335,000	23	357,764	23	410,900
4	2,090,000	5	2,100,000	8	1,460,000	10	1,240,000	7	1,654,435	9	1,246,700
25	400,000	....	280,000	....	225,000	....	235,000	....	280,076	....	247,400
....	230,000	....	240,000	....	240,000	....	195,000	....	168,403	....	163,400
7	1,690,000	4	2,222,000	3	2,585,000	3	2,710,250	3	2,577,403	2	3,317,000
18	950,000	20	750,000	21	565,000	20	530,000	19	630,471	20	520,000
....	15,000	....	18,000	....	10,646	....	13,100	....	11,030	....	8,900
19	800,000	18	857,000	18	745,000	19	545,000	20	621,679	18	610,500
....	22,562	....	29,650	....	29,045	....	29,533	....	42,970	....	45,100
20	800,000	21	700,000	20	636,000	18	630,000	15	792,132	14	779,800
6	1,750,000	6	2,100,000	6	1,735,000	6	1,350,000	8	1,379,774	8	1,328,800
....	10,892	....	9,385	....	8,567	....	9,815	....	11,917	....	7,750
....	260,000	....	200,000	....	170,000	....	160,000	....	218,479	....	164,500
9	1,500,000	12	1,335,000	14	1,060,000	14	855,000	12	1,098,038	11	1,014,400
1	3,950,000	1	4,494,000	1	4,568,500	1	4,603,123	1	4,901,220	1	5,525,000
15	1,100,000	14	1,220,000	15	890,000	16	720,000	17	763,103	17	697,600
10	1,210,000	9	1,600,000	10	1,385,000	8	1,275,000	11	1,116,338	10	1,059,900
....	17,000	....	18,495	....	8,700	....	7,501	....	8,674	....	7,550
....	[3]	....	[3]	....	.....	....	.....	....	.....	....	.....
4	3,775,000	6	3,115,237	6	2,488,146	6	2,373,600	6	2,583,873	6	2,198,000
5	3,670,000	5	3,315,000	5	2,665,000	5	2,490,000	4	3,015,887	4	2,735,300
1	13,590,000	1	15,325,000	1	13,900,000	1	11,135,000	1	12,704,483	1	11,490,300
3	4,390,000	3	4,292,000	4	3,265,000	4	2,640,000	3	3,374,152	3	2,871,600
6	3,410,000	4	4,050,000	3	3,525,000	3	3,220,000	5	2,691,868	5	2,386,000
2	6,770,000	2	8,136,000	2	8,570,568	2	8,590,457	2	8,818,321	2	10,355,000
7	1,349,094	7	1,523,830	7	1,370,789	7	1,389,303	7	1,298,684	7	1,698,700
8	57,562	8	50,184	8	46,736	8	52,134	8	64,808	8	63,900

Northeastern: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont.
Central: Illinois, Indiana, Kentucky, Missouri, Ohio, Tennessee, West Virginia.
Southern: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Oklahoma, Texas.
North Carolina Pine: North Carolina, South Carolina, Virginia.
Lake: Michigan, Minnesota, Wisconsin.
Pacific: California, Nevada, Oregon, Washington.
Rocky Mountain: Arizona, Colorado, Idaho, Montana, New Mexico, Utah, Wyoming.
All other: Iowa, Kansas, Nebraska, South Dakota.

TABLE 4A.—*Value of lumber produced, by States, 1840, 1850, and 1860, compared with 1920.*

State.	1840		1850		1860		1920	
	Rank.	Value.	Rank.	Value.	Rank.	Value.	Rank.	Value.
United States	.....	$12,943,507	.....	$58,521,976	.....	$93,338,606	.....	$1,298,899,107
Alabama	20	169,008	16	1,103,481	17	1,873,484	8	45,708,992
Arizona	.....	.....	.....	.....	.....	.....	.....	4,539,865
Arkansas	19	176,617	.....	122,918	.....	1,155,902	6	56,722,932
California	.....	.....	20	959,485	8	3,943,881	5	60,459,480
Colorado	.....	.....	.....	.....	.....	.....	.....	2,008,300
Connecticut	.....	147,841	.....	534,794	.....	572,731	.....	2,548,960
Delaware	.....	5,562	.....	236,863	.....	276,161	.....	580,140
Florida	.....	20,346	.....	391,034	.....	1,476,645	13	37,934,110
Georgia	.....	114,050	.....	923,403	12	2,412,996	18	23,600,564
Idaho	.....	.....	.....	.....	.....	.....	14	37,694,200
Illinois	16	203,666	11	1,324,484	10	2,543,985	.....	2,215,269
Indiana	8	420,791	6	2,195,351	7	4,271,605	.....	14,426,055
Iowa	.....	50,280	.....	470,760	16	2,124,502	.....	583,011
Kansas	.....	.....	.....	.....	.....	1,550,737	.....	[4] 617,737
Kentucky	.....	130,329	8	1,502,434	11	2,463,085	.....	17,627,246
Louisiana	.....	66,106	13	1,129,677	.....	1,575,995	2	137,155,200
Maine	2	1,808,683	3	5,872,573	4	6,598,565	.....	18,398,784
Maryland	14	226,977	.....	[1] 614,168	.....	[1] 626,989	.....	2,865,888
Massachusetts	11	344,845	7	1,552,265	13	2,218,144	.....	4,279,008
Michigan	9	392,325	5	2,464,329	3	7,040,190	15	34,483,302
Minnesota	.....	.....	.....	57,800	.....	1,234,203	20	20,850,534
Mississippi	18	192,794	.....	913,197	18	1,823,627	4	82,421,440
Missouri	.....	70,355	9	1,479,124	9	3,074,226	.....	10,293,468
Montana	.....	.....	.....	.....	.....	.....	.....	13,509,500
Nebraska	.....	.....	.....	.....	.....	335,340	.....	[4] 13,568
Nevada	.....	.....	.....	.....	.....	.....	.....	[5]
New Hampshire	7	433,217	17	1,099,492	.....	1,208,629	.....	8,412,624
New Jersey	12	271,591	14	1,123,052	20	1,608,610	.....	983,027
New Mexico	.....	.....	.....	20,000	.....	45,150	.....	4,265,120
New York	1	3,891,302	1	13,126,759	2	9,710,945	.....	19,760,181
North Carolina	6	506,766	18	985,075	.....	1,074,003	10	41,901,587
Ohio	13	262,821	4	3,864,452	5	5,158,076	.....	12,914,280
Oklahoma	.....	.....	.....	.....	.....	.....	.....	6,305,606
Oregon	.....	.....	10	1,355,500	.....	690,008	3	121,070,500
Pennsylvania	3	1,150,220	2	7,729,058	1	10,743,752	19	22,994,400
Rhode Island	.....	44,455	.....	241,556	.....	74,592	.....	307,228
South Carolina	5	537,684	15	1,108,880	.....	1,124,440	17	24,401,685
South Dakota	.....	.....	.....	.....	.....	.....	.....	1,849,100
Tennessee	15	217,606	.....	725,387	15	2,199,703	16	33,227,278
Texas	.....	.....	.....	466,012	19	1,735,454	9	45,512,080
Utah	.....	.....	.....	14,620	.....	119,145	.....	178,638
Vermont	10	346,939	.....	618,065	.....	901,519	.....	6,471,430
Virginia	4	538,092	19	977,412	14	2,201,187	11	40,758,592
Washington	.....	.....	.....	.....	.....	1,172,520	1	190,778,250
West Virginia [2]	.....	.....	.....	.....	.....	.....	12	38,556,352
Wisconsin	17	202,239	12	1,218,516	6	4,377,880	7	46,720,392
Wyoming	.....	.....	.....	.....	.....	.....	.....	193,204
All other	.....	.....	.....	.....	.....	.....	.....	.....
State groups: [3]								
Northeastern	1	8,671,632	1	32,748,645	1	34,540,637	.....	87,601,670
Central	3	1,305,568	2	11,091,232	2	19,710,680	3	129,259,948
Southern	4	738,921	3	5,049,722	4	12,054,103	1	435,160,924
North Carolina Pine	2	1,582,542	5	3,071,367	.....	4,399,630	4	107,061,864
Lake	5	594,564	4	3,740,645	3	12,652,273	5	102,054,228
Pacific	.....	.....	.....	2,314,985	5	5,806,409	2	372,308,230
Rocky Mountain	.....	.....	.....	34,620	.....	164,295	.....	62,388,827
All other	.....	50,280	.....	470,760	.....	4,010,579	.....	3,063,416

[1] Includes District of Columbia (product valued at $29,000 in 1850, and $21,125 in 1860).
[2] Part of Virginia prior to 1870.
[3] Distribution of States same as shown in Table 4.
[4] Proportional division for comparative purposes.
[5] Included with California.

Expressing the results in per cents of the total cut for each period, Table 5 shows the relative rank of the eight regional groups of States, as shown by every enumeration since 1840. The history of the lumber industry is traceable in Tables 4, 4a, and 5, since the peak production of even the oldest lumbering regions probably falls within their scope. The indications seem clear that all regions except the Pacific Coast and the Rocky Mountains are definitely past their maximum production.

TABLE 5.—*Lumber cut by groups of States, in per cent of the total.*

Group.	1850	1860	1870	1880	1890	1899	1909	1919	1920
Total	*Per ct.* 100 0	*Per ct.* 100. 0	*Per ct.* 100. 0	*Per ct.* 100. 0	*Per ct.* 100. 0	*Per ct.* 100. 0	*Per ct.* 100. 0	*Per ct.* 100. 0	*Per ct.* 100. 0
Northeastern group	54. 8	37. 0	37. 8	25. 8	19. 8	16. 3	11. 7	7. 5	6. 5
Central group	18. 6	21. 1	20. 0	18. 4	13. 1	16. 1	12. 3	8. 7	8. 1
Southern group	8. 5	13. 0	6. 9	9. 7	15. 6	24. 0	33. 3	36. 8	34. 0
North Carolina pine group	5. 1	4. 8	2. 5	4. 1	4. 7	7. 7	11. 6	9. 8	8. 5
Lake States group	6. 3	13. 6	24. 4	34. 7	34. 6	24. 9	12. 3	7. 8	7. 1
Pacific group	5. 9	6. 4	4. 0	3. 6	8. 5	8. 3	15. 5	25. 5	30. 6
Rocky Mountain group	. 0	. 1	. 9	. 9	1. 1	1. 6	2. 9	3. 7	5. 0
All other	. 8	4. 0	3. 5	2. 8	2. 6	1. 1	. 4	. 2	. 2

Northeastern group: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont.
Central group: Illinois, Indiana, Kentucky, Missouri, Ohio, Tennessee, West Virginia.
Southern group: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Oklahoma, Texas.
North Carolina pine group: North Carolina, South Carolina, Virginia.
Lake States group: Michigan, Minnesota, Wisconsin.
Pacific group: California, Nevada, Oregon, Washington.
Rocky Mountain group: Arizona, Colorado, Idaho, Montana, New Mexico, Utah, Wyoming.
All other: Iowa, Kansas, Nebraska, South Dakota.

LUMBER PRODUCTION BY SPECIES.

Table 6 gives the lumber production by species, from 1899, the earliest enumeration in which species were distinguished. Computed figures, so far as available, have been used. The rank of the first 15 species is shown for each year. The species showing the principal increases in production in 1920 are from the Pacific coast and Rocky Mountains.

TABLE 6.—*Production of lum*

[Reported quantities for each period known, except 1915–1918 and 1920, for which

Species or kind of wood.	1899		1904		1905		1906	
	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).
Total	.....	34,787,084	.....	34,135,139	.....	30,502,961	.....	37,550,736
Softwoods	.....	26,153,063	.....	27,353,312	.....	24,914,618	.....	30,235,245
Yellow pine	1	9,658,548	1	11,533,070	1	8,771,966	1	11,661,077
Douglas fir	5	1,736,507	4	2,928,409	3	4,319,479	2	4,969,843
White pine	2	7,772,391	2	5,332,704	2	4,983,698	3	4,583,727
Hemlock	4	3,420,673	3	3,268,787	4	2,804,083	4	3,537,329
Western yellow pine	8	944,560	7	1,279,237	7	988,542	7	1,386,777
Spruce	6	1,448,091	6	1,303,886	6	1,165,940	6	1,644,987
Cypress	10	495,836	9	749,592	8	753,369	9	839,276
Redwood	13	360,167	12	519,267	11	411,689	11	659,678
Cedar	.....	232,978	.....	223,035	12	363,900	.....	357,845
Larch	.....	50,619	.....	31,784	.....	140,636	.....	289,473
White fir	.....	.....	.....	.....	.....	52,725	.....	104,329
Sugar pine	.....	53,558	.....	.....	.....	123,085	.....	133,640
Balsam fir	.....	.....	.....	.....	.....	35,506	.....	.....
Lodgepole pine	.....	.....	.....	.....	.....	.....	.....	.....
All other softwoods	.....	9,135	.....	183,541	.....	.....	.....	67,264
Hardwoods	.....	8,634,021	.....	6,781,827	.....	5,588,343	.....	7,315,491
Oak	3	4,438,027	5	2,902,855	5	1,833,769	5	2,820,393
Maple	9	633,466	10	587,558	9	608,746	8	882,878
Gum, red and sap	15	285,417	11	523,990	13	316,588	12	453,678
Yellow poplar	7	1,115,242	8	853,554	10	582,748	10	683,132
Chestnut	.....	206,688	15	243,537	.....	224,413	13	407,379
Birch	.....	132,601	.....	224,009	15	240,704	15	370,432
Beech	.....	.....	.....	.....	.....	219,000	.....	275,661
Basswood	14	308,069	.....	228,041	14	258,390	14	376,838
Elm	11	456,731	14	258,330	.....	227,038	.....	224,795
Cottonwood	12	415,124	13	321,574	.....	236,000	.....	263,996
Ash	.....	269,120	.....	169,178	.....	159,634	.....	214,460
Hickory	.....	96,636	.....	106,824	.....	95,803	.....	148,212
Tupelo	.....	.....	.....	.....	.....	35,794	.....	47,882
Walnut	.....	38,681	.....	31,455	.....	29,851	.....	48,174
Sycamore	.....	29,715	.....	18,002	.....	.....	.....	.....
Cherry	.....	.....	.....	.....	.....	.....	.....	.....
All other hardwoods	.....	208,504	.....	312,920	.....	[2] 519,865	.....	97,581
Minor species	.....	.....	.....	.....	.....	.....	.....	.....

[1] Includes a small quantity of softwoods in New York not separately reported.

ber, by species, 1899 to 1920.

years computed quantities are given, with rank of 15 leading kinds of wood.]

1907		1908		1909		1910		1911	
Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).	Rank.	Quantity (M feet).
.....	40,256,154	.....	33,224,369	.....	44,509,761	.....	40,018,282	.....	37,003,207
.....	31,001,225	.....	25,546,006	.....	33,896,959	.....	31,160,856	.....	28,902,388
1	13,215,185	1	11,236,372	1	16,277,135	1	14,143,471	1	12,896,706
2	4,748,872	2	3,675,114	2	4,856,378	2	5,203,644	2	5,054,243
3	4,192,708	3	3,344,921	4	3,900,034	4	3,352,183	3	3,230,584
5	3,373,016	5	2,530,843	5	3,051,399	5	2,836,129	5	2,555,308
7	1,527,195	7	1,275,550	7	1,499,985	6	1,562,106	6	1,330,700
6	1,726,797	6	1,411,992	6	1,748,547	7	1,449,912	7	1,261,728
10	757,639	9	743,297	9	955,635	9	935,659	8	981,527
13	569,450	14	404,802	13	521,630	12	543,493	13	489,768
.....	251,002	.....	272,764	.....	346,008	.....	415,039	.....	374,925
.....	324,509	.....	382,466	15	421,214	.....	382,514	.....	368,216
.....	146,508	.....	98,120	.....	89,318	.....	132,327	.....	124,307
.....	115,005	.....	99,809	.....	97,191	.....	103,165	.....	117,987
.....	[1] 53,339	.....	69,956	.....	108,702	.....	74,580	.....	83,375
.....	.....	.....	.....	.....	23,733	.....	26,634	.....	33,014
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	9,254,929	.....	7,678,363	.....	10,612,802	.....	8,857,426	.....	8,100,819
4	3,718,760	4	2,771,511	3	4,414,457	3	3,522,098	4	3,098,444
8	939,073	8	874,983	8	1,106,604	8	1,006,637	9	951,667
11	689,200	11	589,347	11	706,945	11	610,208	11	582,967
9	862,849	10	654,122	10	858,500	10	734,926	10	659,475
12	653,239	12	539,341	12	663,891	13	535,049	12	529,022
15	387,614	15	386,367	.....	452,370	15	420,769	14	432,571
14	430,005	13	410,072	14	511,244	14	437,325	15	403,881
.....	381,088	.....	319,505	.....	399,151	.....	344,704	.....	304,621
.....	260,579	.....	273,845	.....	347,456	.....	265,107	.....	236,108
.....	293,161	.....	232,475	.....	265,600	.....	220,305	.....	198,629
.....	252,040	.....	225,367	.....	291,209	.....	246,035	.....	214,398
.....	203,211	.....	197,372	.....	333,929	.....	272,252	.....	240,217
.....	68,842	.....	69,170	.....	96,676	.....	92,071	.....	98,142
.....	41,490	.....	43,681	.....	46,108	.....	36,449	.....	38,293
.....	46,044	.....	43,332	.....	56,511	.....	45,063	.....	42,836
.....	9,087	.....	18,054	.....	24,594	.....	18,237	.....	21,422
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	18,647	.....	29,819	.....	37,557	.....	50,191	.....	48,126

[1] Reported as "Mixed" and probably includes some softwoods.

TABLE 6.—*Production of lumber*

	1912		1913		1914		1915	
Total	.....	39,158,414	.....	38,387,009	.....	37,346,023	.....	37,011,656
Softwoods	.....	30,526,416	.....	30,302,549	.....	29,406,839	.....	29,484,763
Yellow pine	1	14,737,052	1	14,839,363	1	14,472,804	1	14,700,000
Douglas fir	2	5,175,123	2	5,556,096	2	4,763,693	2	4,431,249
White pine	4	3,138,227	4	2,568,636	4	2,632,587	4	2,700,000
Hemlock	5	2,426,554	5	2,319,982	5	2,165,728	5	2,275,000
Western yellow pine	7	1,219,444	6	1,258,528	6	1,327,365	7	1,293,985
Spruce	6	1,238,600	8	1,046,816	7	1,245,614	6	1,400,000
Cypress	9	997,227	7	1,097,247	8	1,013,013	8	1,100,000
Redwood	13	496,796	12	510,271	12	535,199	13	420,294
Cedar	.....	329,000	.....	358,444	14	499,903	14	420,000
Larch	15	407,064	14	395,273	.....	358,561	.....	375,000
White fir	.....	122,613	.....	88,109	.....	112,627	.....	125,048
Sugar pine	.....	132,416	.....	149,926	.....	136,159	.....	117,701
Balsam fir	.....	84,261	.....	93,752	.....	125,212	.....	100,000
Lodgepole pine	.....	22,039	.....	20,106	.....	18,374	.....	26,486
Hardwoods	.....	8,631,998	.....	8,084,460	.....	7,939,184	.....	7,526,893
Oak	3	3,318,952	3	3,211,718	3	3,278,908	3	2,970,000
Maple	8	1,020,864	9	901,487	9	909,743	9	900,000
Gum, red and sap	10	694,260	10	772,514	10	675,380	10	655,000
Yellow poplar	11	623,289	11	620,176	13	519,221	12	464,000
Chestnut	12	554,230	13	505,802	11	540,591	11	490,000
Birch	.....	388,272	15	378,739	15	430,667	15	415,000
Beech	14	435,250	.....	365,501	.....	376,464	.....	360,000
Basswood	.....	296,717	.....	257,102	.....	264,656	.....	260,000
Elm	.....	262,141	.....	214,532	.....	214,294	.....	210,000
Cottonwood	.....	227,477	.....	208,938	.....	195,198	.....	180,000
Ash	.....	234,548	.....	207,816	.....	189,499	.....	190,000
Hickory	.....	278,757	.....	162,980	.....	116,113	.....	100,000
Tupelo	.....	122,545	.....	120,420	.....	124,480	.....	170,000
Walnut	.....	43,083	.....	40,565	.....	25,573	.....	90,000
Sycamore	.....	49,468	.....	30,804	.....	22,773	.....	25,000
Cherry	.....	22,245	.....	14,126	.....	.....	.....	.....
Minor species	.....	59,900	.....	71,240	.....	55,624	.....	47,893

by species, 1899 to 1920—Continued.

1916		1917		1918		1919		1920	
.....	39,807,251	.....	35,831,239	.....	31,890,494	.....	34,552,076	.....	33,798,800
.....	31,331,900	.....	29,174,122	.....	25,667,531	.....	27,407,130	.....	26,809,500
1	15,055,000	1	13,539,464	1	10,845,000	1	13,062,938	1	11,091,000
2	5,416,000	2	5,585,000	2	5,820,000	2	5,902,169	2	6,960,003
4	2,700,000	3	2,250,000	3	2,200,000	6	1,723,642	6	1,500,000
5	2,350,000	5	2,200,000	5	1,875,000	5	1,754,998	5	1,850,000
6	1,690,000	6	1,960,000	6	1,710,000	4	1,755,015	4	2,290,000
7	1,250,000	7	1,125,000	7	1,125,000	7	979,968	9	825,000
8	1,000,000	8	950,000	10	630,000	10	656,212	10	625,000
13	490,850	11	487,458	11	443,231	12	410,442	11	476,500
.....	410,000	.....	265,000	.....	245,000	.....	332,234	.....	260,000
14	455,000	14	360,000	14	355,000	13	338,121	14	390,000
.....	190,000	.....	218,200	.....	213,000	.....	223,422	.....	280,000
.....	169,250	.....	132,600	.....	111,800	.....	133,658	.....	146,000
.....	125,000	.....	88,900	.....	82,000	.....	68,030	.....	85,000
.....	30,800	.....	12,500	.....	12,500	.....	16,281	.....	31,000
.....	8,475,351	.....	6,657,117	.....	6,222,963	.....	7,144,946	.....	6,989,300
3	3,300,000	4	2,250,000	4	2,025,000	3	2,708,280	3	2,500,000
9	975,000	9	860,000	8	815,000	8	857,489	7	875,000
10	800,000	10	788,000	9	765,000	9	851,431	8	850,000
11	560,000	15	350,000	15	290,000	.....	328,538	15	350,000
12	535,000	13	415,000	12	400,000	11	545,696	12	475,000
15	450,000	12	415,000	13	370,000	14	375,079	13	405,000
.....	360,000	.....	296,000	15	290,000	15	358,985	.....	325,000
.....	275,000	.....	203,000	.....	200,000	.....	183,562	.....	195,000
.....	240,000	.....	205,000	.....	195,000	.....	194,417	.....	225,000
.....	200,000	.....	190,000	.....	175,000	.....	144,155	.....	155,000
.....	210,000	.....	175,000	.....	170,000	.....	154,931	.....	170,000
.....	125,000	.....	95,000	.....	100,000	.....	170,013	.....	150,000
.....	275,000	.....	265,000	.....	237,000	.....	143,730	.....	180,000
.....	90,000	.....	62,000	.....	100,000	.....	39,218	.....	35,000
.....	40,000	.....	32,000	.....	30,000	.....	28,114	.....	31,000
.....	40,351	.....	56,117	.....	60,963	.....	61,308	.....	68,300

Figures 13 and 14 supplement Tables 4 and 6 by showing graphically the computed 1920 lumber production, by States and by species, respectively.

The several woods which go to make up the bulk of the lumber cut in the United States are treated individually in the following

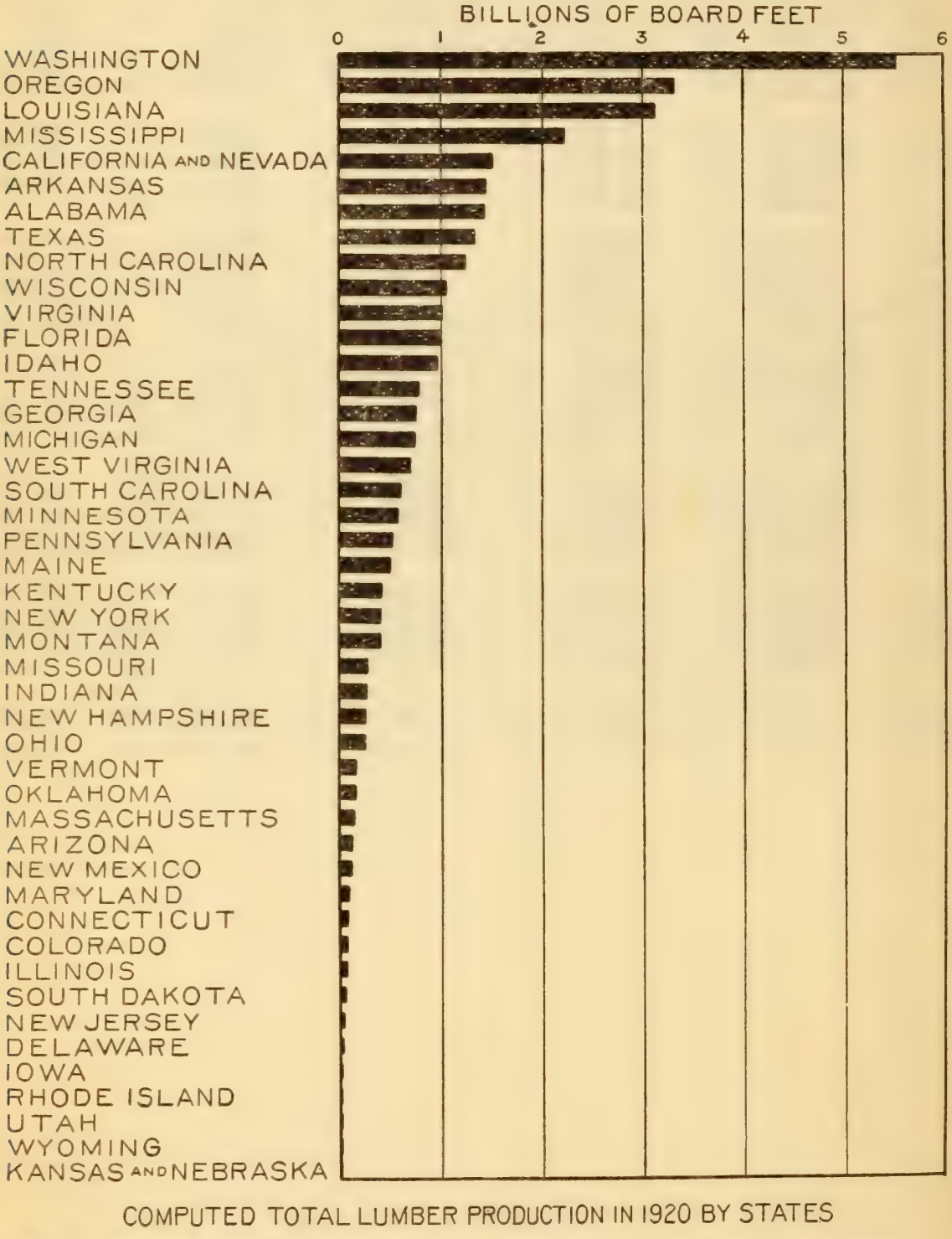

FIG. 13.—The three Pacific Coast States now stand among the first five in point of production.

pages. The tabulation for each species shows by States the number of active mills reporting, the quantity reported cut, the proportion of the total reported cut, the average value per thousand feet f. o. b. mill, and the computed total cut.

The question is frequently asked in connection with lumber production figures as to what part shortleaf pine forms of the total

quantity of yellow pine reported, or the ratio of white oak cut to the total. It is not practicable in lumber census work to do more than group the figures for all of the yellow pines together, and treat the

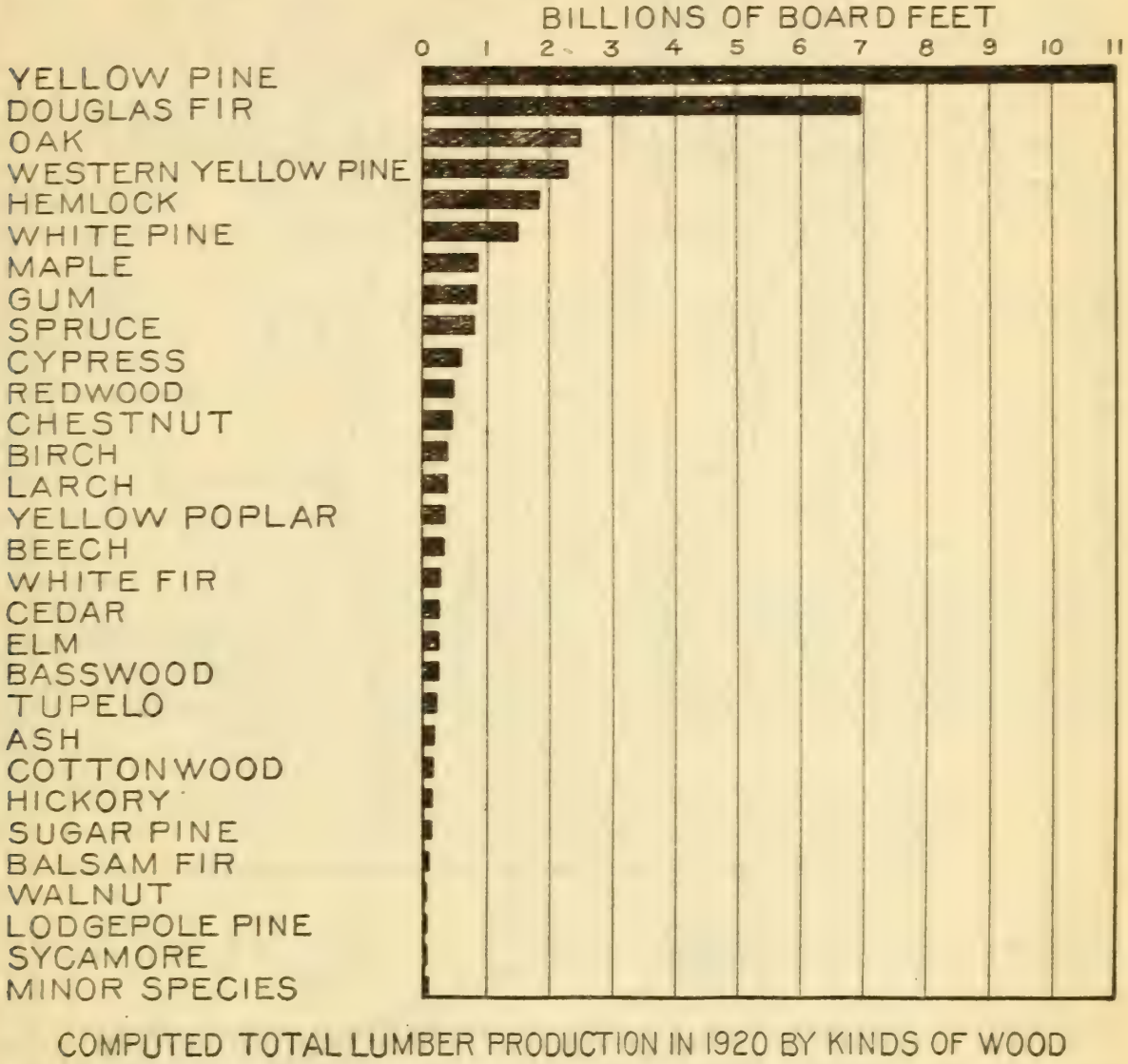

FIG. 14.—The predominance of valuable softwoods in North American forests was one of the reasons for the rapid economic development of the United States.

oaks, gums, cedars, and other woods in the same way, since no standard classification is found among the lumbermen. Producers in different sections frequently apply different local names to the same species, and only confusion would follow an attempt to segregate the figures.

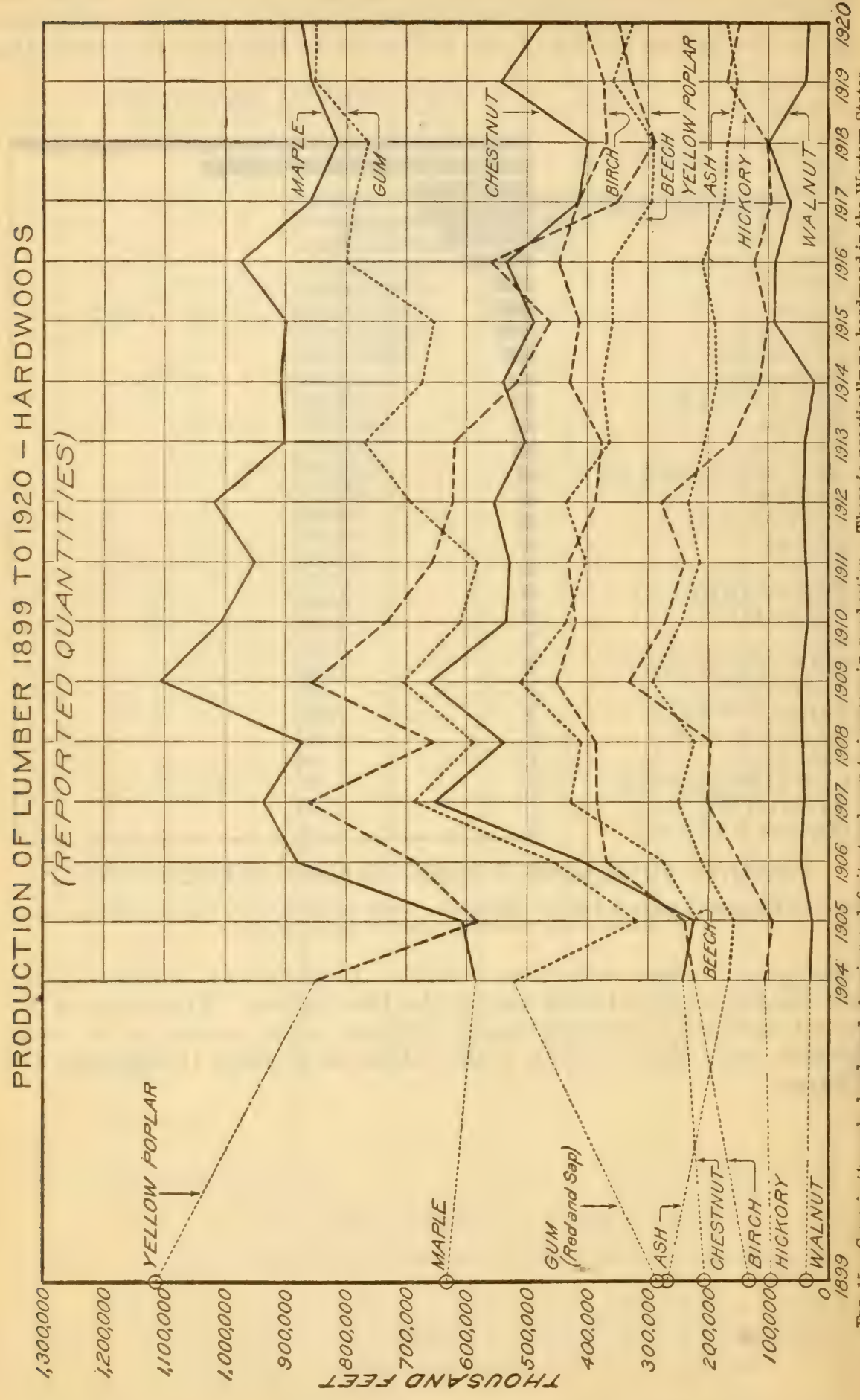

FIG. 15.—Gum is the only hardwood showing a definite tendency to increase in production. There is practically no hardwood in the Western States.

TABLE 7.—*Reported production of yellow pine [1] lumber in 1920.*

[Computed total production in the United States, 11,091,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	6,014	8,964,313	100.0	$35.89
Louisiana	202	2,066,263	23.0	42.50
Mississippi	549	1,322,958	14.8	36.67
Texas	221	1,125,015	12.6	33.81
Alabama	872	985,773	11.0	31.44
Florida	196	744,373	8.3	35.77
Arkansas	361	586,369	6.5	36.77
North Carolina	1,053	517,425	5.8	29.88
Georgia	694	478,547	5.3	26.84
South Carolina	367	436,246	4.9	39.06
Virginia	731	404,804	4.5	33.48
Oklahoma	48	135,280	1.5	37.60
Tennessee	292	74,167	.8	25.16
Maryland	149	35,360	.4	29.71
Missouri	92	23,693	.3	25.57
All other States (see Table 37, p. 56)	187	28,040	.3	27.43

[1] Longleaf pine (*Pinus palustris*), also known as Georgia pine and hard pine and exported as pitch pine; cut mostly in the Gulf States. North Carolina pine (*P. taeda*), also called shortleaf, loblolly, old field, rosemary, and Virginia pine; cut mostly in Virginia, North and South Carolina, Arkansas, and Texas. Shortleaf pine (*P. echinata*); cut mostly in Virginia, North and South Carolina, Arkansas, Missouri, Louisiana, and Mississippi. Sand pine (*P. clausa*); Florida and Alabama. Slash (or Cuban) pine (*P. heterophylla*); cut mostly in Georgia and the Gulf States east of the Mississippi River. Scrub pine (*P. virginiana*), also called Jersey pine; cut in the Middle Atlantic States. Pitch pine (*P. rigida*); Middle Atlantic and Northern States. Spruce pine (*P. glabra*); Gulf States. Pond pine (*P. serotina*); South Atlantic States. Table-Mountain pine (*P. pungens*); Appalachian Mountains.

TABLE 8.—*Reported production of Douglas fir [1] lumber, 1920.*

[Computed total production in the United States, 6,960,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill
		M feet b. m.	Per cent.	
United States	1,403	6,956,683	100.0	$34.59
Washington	464	4,275,017	61.5	34.94
Oregon	527	2,347,368	33.7	34.80
California	101	161,632	2.3	30.50
Idaho	131	105,786	1.5	25.09
Montana	84	55,670	.8	29.73
All other States (see Table 37, p. 56)	96	11,210	.2	31.16

[1] Douglas fir (*Pseudotsuga taxifolia*) is the principal commercial species.

TABLE 9.—*Reported production of oak*[1] *lumber in 1920.*

[Computed total production in the United States, 2,500,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	8,552	1,853,580	100.0	$46.88
Arkansas	477	225,422	12.2	43.42
Tennessee	551	221,260	11.9	46.00
West Virginia	383	202,499	10.9	59.51
Virginia	813	166,667	9.0	51.07
Kentucky	532	141,588	7.6	44.25
Mississippi	320	115,399	6.2	41.35
Missouri	377	101,667	5.5	36.95
Louisiana	104	92,725	5.0	39.84
Pennsylvania	715	88,729	4.8	45.11
Ohio	454	85,131	4.6	54.21
North Carolina	625	82,671	4.5	45.07
Indiana	375	79,640	4.3	62.74
Alabama	425	46,646	2.5	33.26
New York	625	32,157	1.7	53.88
Texas	73	27,074	1.5	42.43
Georgia	239	26,003	1.4	37.79
All other States (see Table 37, p. 56)	1,464	118,302	6.4	43.41

[1] Commercially the oaks are classed as white and red. The principal commercial oaks are as follows: *White oaks.*—White oak (*Quercus alba*) is the white oak common throughout the eastern half of the United States; chestnut (or rock) oak (*Q. prinus*) is found in the Appalachian region; post oak (*Q. minor*) and bur oak (*Q. macrocarpa*) are common throughout the eastern half of the country; overcup oak (*Q. lyrata*) and cow (or basket) oak (*Q. michauxii*) are the principal southern white oaks. *Red oaks.*—Red oak (*Q. rubra*) is the red oak common in the eastern part of the United States; Texan oak (*Q. texana*) is the principal red oak sawed in the lower Mississippi Valley; pin oak (*Q. palustris*) is found in the Eastern and Central States; scarlet oak (*Q. coccinea*) is the northern and northeastern red oak; yellow (or black) oak (*Q. velutina*) is common in most States east of the Rocky Mountains; willow oak (*Q. phellos*) is cut mostly in the Southern States.

TABLE 10.—*Reported production of western yellow pine*[1] *lumber, 1920.*

[Computed total production in the United States, 2,290,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	900	2,270,898	100.0	$38.73
Oregon	180	630,326	27.8	44.03
California, including Nevada	141	509,471	22.4	37.50
Idaho	124	366,857	16.1	35.97
Washington	148	278,573	12.3	37.34
Montana	67	173,507	7.6	34.78
Arizona	19	119,406	5.3	37.48
New Mexico	53	104,059	4.6	38.22
South Dakota	44	45,033	2.0	41.00
Colorado	81	37,191	1.6	27.22
All other States (see Table 37, p. 56)	43	6,475	.3	23.71

[1] Western yellow pine (*Pinus ponderosa*) is the one species cut as such.

TABLE 11.—*Reported production of hemlock*[1] *lumber, 1920.*

[Computed total production in the United States, 1,850,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	3,001	1,685,320	100.0	$32.05
Washington	124	495,444	29.4	27.90
Wisconsin	213	403,325	23.9	31.61
Michigan	176	206,840	12.3	31.58
Pennsylvania	334	134,740	8.0	44.69
Oregon	47	89,130	5.3	25.73
West Virginia	91	85,408	5.1	41.98
New York	946	74,004	4.4	38.99
Maine	310	54,726	3.3	31.09
North Carolina	76	33,271	2.0	30.64
Tennessee	57	32,721	1.9	29.07
New Hampshire	143	23,508	1.4	30.36
Vermont	203	17,330	1.0	34.11
Virginia	65	16,992	1.0	37.46
Massachusetts	94	7,105	.4	29.19
Kentucky	43	6,775	.4	26.05
All other States (see Table 37, p. 56)	79	4,001	.2	32.27

[1] Hemlock (*Tsuga canadensis*) is cut in the Lake States, Northeastern States, and the Appalachian region. Western hemlock (*T. heterophylla*) is cut in Washington and Oregon. Mountain hemlock (*T. mertensiana*) is cut in small quantities. Carolina hemlock (*T. caroliniana*) is occasionally cut in the Appalachian region.

TABLE 12.—*Reported production of white pine*[1] *lumber in 1920.*

[Computed total production in the United States 1,500,000 M feet.

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	2,769	1,377,327	100.0	$41.49
Minnesota	170	429,210	31.2	37.45
Idaho	36	261,251	19.0	53.92
Maine	347	165,102	12.0	33.94
New Hampshire	195	121,202	8.8	32.07
Wisconsin	207	88,979	6.5	49.20
Washington	38	69,051	5.0	45.02
New York	725	66,311	4.8	46.79
Massachusetts	164	57,905	4.2	30.26
Michigan	129	36,186	2.6	48.07
Pennsylvania	337	29,004	2.1	48.12
Vermont	88	13,827	1.0	41.14
West Virginia	51	6,163	.4	40.12
Virginia	86	6,127	.4	32.97
All other States (see Table 37, p. 56)	196	27,009	2.0	36.92

[1] White pine (*Pinus strobus*) is the white pine cut in the Lake States, the Northeastern States, and the Appalachian region. Norway (or red) pine (*P. resinosa*) though botanically a yellow pine, is cut in the Lake States and largely marketed with white pine. Jack pine (*P. banksiana*) is cut in the Lake States. Western white pine (*P. monticola*) is cut in Idaho, Montana, Washington, and Oregon.

TABLE 13.—*Reported production of maple [1] lumber in 1920.*

[Computed total production in the United States, 875,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	4,131	768,345	100.0	$50.16
Michigan	212	279,911	36.4	54.04
Wisconsin	264	188,252	24.5	49.77
New York	857	72,724	9.5	48.38
West Virginia	186	56,630	7.4	57.26
Pennsylvania	454	39,194	5.1	47.01
Indiana	310	26,664	3.5	47.87
Ohio	342	21,817	2.8	40.01
Vermont	197	17,759	2.3	41.10
Missouri	105	8,679	1.1	40.99
New Hampshire	82	7,702	1.0	34.32
All other States (see Table 37, p. 56)	1,122	49,013	6.4	39.62

[1] Sugar (or hard) maple (*Acer saccharum*) is cut principally in the Northern States. Silver (or soft) maple (*A. saccharinum*) is also cut in the Northern States. Red (or soft) maple (*A. rubrum*) is the principal species cut in the Southern States. Broadleaf maple (*A. macrophyllum*) is cut in the Pacific coast States.

TABLE 14.—*Reported production of gum [1] lumber in 1920.*

[Computed total production in the United States, 850,000 M. feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m	Per cent.	
United States	2,060	684,745	100.0	$35.24
Arkansas	288	194,981	28.5	36.79
Mississippi	232	147,781	21.6	34.86
Louisiana	103	125,944	18.4	35.79
Tennessee	234	52,821	7.7	34.47
Alabama	162	33,700	4.9	29.46
South Carolina	34	20,483	3.0	35.29
Texas	55	18,033	2.6	36.33
Georgia	49	17,991	2.6	35.51
Missouri	60	17,304	2 5	37.08
Virginia	143	12,607	1.8	27.88
North Carolina	105	8,687	1.3	26.56
Kentucky	171	7,417	1.1	28.48
Florida	7	7,255	1.1	34.45
Oklahoma	6	6,546	1.0	54.60
All other States (see Table 37, p. 56)	411	13,195	1.9	32.23

[1] Red gum (*Liquidambar styraciflua*) is the only species that goes into red gum lumber. Commercial sap gum is the sapwood of the red gum.

TABLE 15.—*Reported production of spruce [1] lumber in 1920.*

[Computed total production in the United States, 825,000 M. feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m	Per cent.	
United States	1,241	805,320	100.0	$38.94
Washington	75	192,671	23.9	37.70
Oregon	39	165,418	20.5	37.03
Maine	244	164,652	20.5	40.65
West Virginia	11	48,121	6.0	46.23
New Hampshire	94	43,835	5.4	39.80
North Carolina	9	33,588	4.2	42.90
Minnesota	74	31,492	3.9	34.97
New York	188	27,823	3.5	44.33
Vermont	205	25,962	3.2	38.92
Montana	21	21,573	2.7	32.98
Colorado	64	13,859	1.7	32.89
Idaho	24	10,572	1.3	42.38
Michigan	67	8,686	1.1	39.79
All other States (see Table 37, p. 56)	126	17,068	2.1	32.87

[1] Red spruce (*Picea rubens*) is the principal species cut in the Northeastern States and the Appalachian region. Sitka spruce (*P. sitchensis*) is the principal species cut in Oregon and Washington. Black spruce (*P. mariana*) is cut in limited quantities in the Northeastern States. White spruce (*P. canadensis*) is cut in the Lake States, New York, and northern New England. Engelmann spruce (*P. engelmanni*) is cut in the Rocky Mountain region.

TABLE 16.—*Reported production of cypress [1] lumber in 1920.*

[Computed total production in the United States, 625,000 M. feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	656	571,674	100.0	$51.02
Louisiana	90	273,116	47.8	54.84
Florida	40	105,329	18.4	52.27
Georgia	59	45,863	8.0	53,18
Missouri	43	41,053	7.2	39.93
South Carolina	33	36,183	6.3	51.35
Arkansas	134	34,790	6.1	37.78
Mississippi	63	11,945	2.1	38.97
North Carolina	54	5,913	1.0	42.48
Tennessee	45	5,737	1.0	43.04
All other States (see Table 33, p. 56)	95	11,745	2.1	40.00

[1] Bald cypress (*Taxodium distichum*) is the one species cut as such.

TABLE 17.—*Reported production of redwood [1] lumber in 1920.*

[Computed total production in the United States, 476,500 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	43	476,003	100.0	$46.90
California	43	476,003	100.0	46.90

[1] Redwood (*Sequoia sempervirens*) is the species chiefly cut. Bigtree (*S. washingtoniana*) furnishes a minor part of the redwood production.

TABLE 18.—*Reported production of chestnut [1] lumber in 1920.*

[Computed total production in the United States, 475,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	2,977	379,675	100.0	$42.48
West Virginia	279	97,301	25.6	50.93
Virginia	421	56,103	14.8	46.86
North Carolina	157	47,170	12.4	39.42
Pennsylvania	617	45,067	11.9	37.09
Tennessee	198	32,653	8.6	42.52
Connecticut	117	22,875	6.0	35.59
New York	419	17,780	4.7	42.38
Massachusetts	110	17,682	4.7	30.50
Kentucky	258	16,011	4.2	32.40
Ohio	167	7,227	1.9	39.92
Maryland	87	5,342	1.4	34.46
New Jersey	44	3,764	1.0	46.11
Rhode Island	16	3,135	.8	32.94
Georgia	6	2,561	.7	34.57
All other States (see Table 37, p. 56)	81	5,004	1.3	32.11

[1] Chestnut (*Castanea dentata*) is the only species included in chestnut lumber.

TABLE 19.—*Reported production of birch [1] lumber in 1920.*

[Computed total production in the United States, 405,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	1,882	346,577	100.0	$53.44
Wisconsin	198	177,305	51.2	57.27
Michigan	128	58,866	17.0	54.88
New York	445	33,221	9.6	52.04
Maine	128	17,496	5.0	39.01
Vermont	189	15,307	4.4	42.75
West Virginia	77	10,910	3.1	69.21
New Hampshire	104	10,023	2.9	35.01
Minnesota	78	6,427	1.9	36.00
Pennsylvania	181	6,370	1.8	51.71
All other States (see Table 37, p. 56)	354	10,652	3.1	37.69

[1] Yellow birch (*Betula lutea*) is the principal species cut in the Lake States, New England, and New York. Paper birch (*B. papyrifera*) and white (or gray) birch (*B. populifolia*) are also cut to a limited extent in New England. Sweet (or cherry) birch (*B. lenta*) is cut in West Virginia and Pennsylvania. River (or red) birch (*B. nigra*) is cut in the Southern States.

TABLE 20.—*Reported production of larch [1] lumber in 1920.*

[Computed total production in the United States, 390,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	528	375,103	100.0	$30.28
Idaho	62	142,103	37.9	31.01
Montana	44	112,400	30.0	30.22
Washington	75	66,266	17.7	28.01
Oregon	19	17,938	4.8	31.97
Michigan	86	12,457	3.3	31.89
Wisconsin	114	11,765	3.1	28.71
Minnesota	89	11,706	3.1	31.68
All other States (see Table 37, p. 56)	39	468	.1	38.85

[1] Western larch (*Larix occidentalis*) is the species cut in the inland Empire and the Pacific Northwest. Tamarack, or larch (*L. laricina*), is cut in the Lake States and New England.

TABLE 21.—*Reported production of yellow poplar [1] lumber in 1920.*

[Computed total production in the United States, 350,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	2,583	270,407	100.0	$58.87
West Virginia	236	64,443	23.8	74.28
Tennessee	421	45,436	16.8	60.15
Virginia	329	34,738	12.8	55.15
Kentucky	294	31,462	11.6	54.26
North Carolina	220	20,584	7.6	49.61
Georgia	87	17,169	6.4	62.86
Alabama	198	16,933	6.3	39.79
Mississippi	97	10,915	4.0	45.43
Ohio	174	9,304	3.4	59.51
Indiana	166	5,875	2.2	61.40
Pennsylvania	157	4,528	1.7	49.01
South Carolina	27	3,789	1.4	42.71
Maryland	56	2,077	.8	40.24
All other States (see Table 37, p. 56)	121	3,154	1.2	39.83

[1] Yellow poplar (*Liriodendron tulipifera*) is the only species that goes into poplar lumber.

TABLE 22.—*Reported production of beech [1] lumber in 1920.*

[Computed total production in the United States, 325,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	3,051	264,572	100.0	$36.51
New York	700	43,982	16.6	37.59
Michigan	127	41,987	15.9	41.28
Pennsylvania	247	34,471	13.0	37.29
Indiana	314	33,471	12.7	35.83
West Virginia	196	27,826	10.5	40.92
Ohio	304	18,970	7.2	33.99
Kentucky	283	17,565	6.6	28.74
Louisiana	33	10,446	3.9	26.14
Tennessee	285	8,711	3.3	29.84
Vermont	132	6,206	2.3	36.04
New Hampshire	58	4,447	1.7	34.42
Virginia	67	4,189	1.6	47.79
Mississippi	39	2,289	.9	32.42
North Carolina	30	2,154	.8	32.26
All other States (see Table 37, p. 56)	236	7,858	3.0	31.41

[1] Beech (*Fagus atropunicea*) is the only species that goes into beech lumber.

TABLE 23.—*Reported production of white fir*[1] *lumber in 1920.*

[Computed total production in the United States, 280,000 M feet.]

State.	Number of active mills reporting	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	231	279,645	100.0	$30.44
California, including Nevada	65	151,957	54.3	30.05
Idaho	38	54,424	19.5	35.23
Washington	43	32,395	11.6	22.49
Montana	4	22,891	8.2	37.80
Oregon	51	14,199	5.1	23.30
All other States (see Table 37, p. 56)	30	3,779	1.3	27.38

[1] White fir (*Abies concolor*) is cut only in the West. Marketed as White fir are: Lowland white fir (*A. grandis*), cut mostly in Idaho and Montana; silver fir (*A. amabilis*), cut chiefly in Washington; red fir (*A. magnifica*), cut chiefly in California; alpine fir (*A. lasiocarpa*), cut chiefly in the northern Rocky Mountain and Cascade Mountain region.

TABLE 24.—*Reported production of cedar*[1] *lumber in 1920.*

[Computed total production in the United States, 260,000 M feet].

State	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	637	245,079	100.0	$38.68
Washington	96	113,351	46.2	36.65
California	71	36,030	14.7	31.68
Oregon	51	34,482	14.1	47.09
Idaho	21	26,663	10.9	34.48
Tennessee	111	10,963	4.5	69.61
Maine	55	6,837	2.8	35.27
Michigan	34	5,252	2.1	33.56
Wisconsin	41	2,445	1.0	29.72
All other States (see Table 37, p. 56)	157	9,056	3.7	42.85

[1] Western red cedar (*Thuja plicata*) is cut in Washington, Oregon, and Idaho. Port Orford cedar (*Chamaecyparis lawsoniana*) is cut in Oregon. Alaska cedar (*C. nootkatensis*) is cut in Washington. Incense cedar (*Libocedrus decurrens*) is cut in California. Northern white cedar (*T. occidentalis*) is cut in the Lake States and the Northeastern States. Southern white cedar (*C. thyoides*) is cut in the Atlantic Coast States. Red cedar (*Juniperus virginiana*) and southern red juniper (*Y. barbadensis*) are cut principally in Tennessee, Florida, and Alabama.

TABLE 25.—*Reported production of elm*[1] *lumber in 1920.*

[Computed total production in the United States, 225,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	2,473	182,845	100.0	$47.23
Wisconsin	237	49,120	26.9	53.91
Michigan	164	28,951	15.8	59.07
Arkansas	117	20,938	11.4	43.24
Indiana	253	20,012	10.9	51.88
Ohio	280	10,751	5.9	43.36
Mississippi	75	9,272	5.1	44.78
Missouri	122	9,118	5.0	32.17
New York	423	6,879	3.8	40.31
Tennessee	139	6,692	3.7	31.92
Louisiana	45	5,763	3.1	27.72
Minnesota	96	4,611	2.5	28.05
All other States (see Table 37, p. 56)	522	10,738	5.9	32.14

[1] White (or soft) elm (*Ulmus americana*) is cut in all of the States east of the Rocky Mountains. Slippery (or red, or soft) elm (*U. pubescens*) is cut in the same region as white elm. Cork (or true rock) elm (*U. racemosa*) is cut in the Lake States. Wing elm (*U. alata*) and cedar elm (*U. crassifolia*) are occasionally cut in the lower Mississippi Valley.

TABLE 26.—*Reported production of basswood* [1] *lumber in 1920.*

[Computed total production in the United States, 195,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	2,372	169,276	100.0	$54.28
Wisconsin	225	59,067	34.9	57.05
Michigan	154	23,562	13.9	56.65
West Virginia	138	19,369	11.5	60.81
New York	679	14,834	8.8	50.44
North Carolina	66	7,616	4.5	44.81
Virginia	56	7,258	4.3	64.16
Minnesota	104	5,412	3.2	38.69
Tennessee	70	4,953	2.9	52.87
Ohio	165	4,940	2.9	50.14
Indiana	122	4,662	2.8	53.24
Pennsylvania	153	4,417	2.6	53.59
Vermont	127	4,308	2.5	44.88
Kentucky	99	4,303	2.5	42.36
All other States (see Table 37, p. 56)	214	4,575	2.7	37.56

[1] Basswood (or linn) (*Tilia americana*) is cut principally in the Lake States. White basswood (*T. hetero phylla*) is cut in the Appalachian Mountain region. Downy basswood (*T. pubescens*) is cut in limited quantity in the Southern States.

TABLE 27.—*Reported production of tupelo* [1] *lumber in 1920.*

[Computed total production in the United States, 180,000 M feet.]

State.	Number of active mills reporting	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	721	161,055	100.0	$33.68
Louisiana	45	87,038	54.0	35.09
Alabama	46	12,696	7.9	36.74
South Carolina	21	12,278	7.6	38.54
Mississippi	52	8,758	5.4	27.01
Arkansas	71	7,685	4.8	31.73
Virginia	39	7,639	4.8	29.12
North Carolina	45	4,730	2.9	32.90
Tennessee	84	3,583	2.2	28.99
Missouri	25	3,430	2.1	22.52
Illinois	10	2,494	1.6	18.46
All other States (see Table 37, p. 56)	283	10,724	6.7	32.22

[1] Tupelo (or cotton gum) (*Nyssa aquatica*) is cut in the Gulf States. Black gum (or pepperidge) (*N. sylvatica*) is cut in the Atlantic and Central States and is sold both as tupelo and black gum. Water gum (*N. biflora*) is cut to a small extent in the South Atlantic States.

TABLE 28.—*Reported production of ash*[1] *lumber in 1920.*

[Computed total production in the United States, 170,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	3,161	147,618	100.0	$61.28
Louisiana	66	20,051	13.6	57.44
Arkansas	130	16,516	11.2	53.54
Wisconsin	173	12,939	8.8	56.55
Indiana	223	12,104	8.2	87.42
Tennessee	173	10,911	7.4	69.59
Ohio	284	9,948	6.7	76.28
New York	620	9,363	6.4	57.74
Mississippi	75	7,665	5.2	50.54
Michigan	126	5,816	3.9	55.59
West Virginia	109	5,063	3.4	86.96
Georgia	27	4,894	3.3	55.37
Pennsylvania	250	3,867	2.6	62.69
Alabama	42	3,596	2.4	51.69
Missouri	68	3,527	2.4	55.45
South Carolina	20	3,372	2.3	70.99
Kentucky	157	3,321	2.3	50.18
All other States (see Table 37, p. 56)	618	14,665	9.9	48.36

[1] Lumber trade practice specifies white ash and brown ash. The former is cut from the white-ash tree and the latter from the black-ash tree. White ash (*Fraxinus americana*) is cut principally in the Central States. Green ash (*F. lanceolata*) is cut principally in Southern States. Black ash (*F. nigra*) is cut in the Lake States and northeastern States. Red ash (*F. pennsylvanica*) is cut in limited quantity in the Eastern States. Oregon ash (*F. oregona*) is cut in the Pacific Northwest.

TABLE 29.—*Reported production of cottonwood*[1] *lumber in 1920.*

[Computed total production in the United States, 155,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	926	138,076	100.0	$33.38
Minnesota	99	47,773	34.6	27.38
Mississippi	55	21,798	15.8	38.51
Arkansas	47	13,673	9.9	43.08
Louisiana	34	8,165	5.9	31.19
Wisconsin	50	7,464	5.4	32.26
Missouri	57	6,133	4.4	37.37
Michigan	42	5,454	4.0	32.04
Tennessee	43	4,937	3.6	40.81
Iowa	44	3,578	2.6	35.46
Oklahoma	10	3,160	2.3	31.78
All other States (see Table 37, p. 56)	445	15,941	11.5	34.15

[1] Common cottonwood (*Populus deltoides*) is the species most commonly cut east of the Rocky Mountains and more particularly in the lower Mississippi Valley. Swamp cottonwood (*P. heterophylla*) is cut in the Mississippi Valley States. Aspen (or popple) (*P. tremuloides*) is cut in the Lake States and the Northeastern States, and to a limited extent in the Rocky Mountains and farther west. Large-toothed aspen (*P. grandidentata*) is cut in the Lake States and Northeastern States. Balm of Gilead (*P. balsamifera*) is cut in the Lake States and Eastern States. Black cottonwood (*P. trichocarpa*) is cut in the Pacific Coast States.

TABLE 30.—*Reported production of hickory [1] lumber in 1920.*

[Computed total production in the United States, 150,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	2,686	131,553	100.0	$52.57
Arkansas	174	28,594	21.7	58.59
Tennessee	306	21,993	16.7	48.82
Kentucky	259	11,492	8.7	48.96
West Virginia	206	11,448	8.7	49.18
Indiana	267	9,532	7.2	55.78
Mississippi	79	9,345	7.1	53.09
Ohio	309	6,818	5.2	62.48
Missouri	130	6,370	4.9	52.71
Louisiana	43	4,913	3.7	62.32
Pennsylvania	134	3,799	2.9	43.21
Virginia	179	2,982	2.3	41.11
Illinois	70	2,848	2.2	42.59
North Carolina	104	2,327	1.8	37.92
All other States (see Table 37, p. 56)	426	9,092	6.9	49.36

[1] Several species of hickory are cut, the principal ones being shagbark (*Hicoria ovata*), shellbark (*H. laciniosa*), pignut (*H. glabra*), bitternut (*H. minima*), and mockernut (*H. alba*).

TABLE 31.—*Reported production of sugar pine [1] lumber in 1920.*

[Computed total production in the United States, 146,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	73	145,906	100.0	$48.76
California	62	141,134	96.7	49.20
Oregon	11	4,772	3.3	35.78

[1] Sugar pine (*Pinus lambertiana*) is the only species cut as such and is found commercially only in California and southern Oregon.

TABLE 32.—*Reported production of balsam fir [1] lumber in 1920.*

[Computed total production in the United States, 85,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill
		M feet b. m.	Per cent.	
United States	407	70,511	100.0	$34.33
Maine	142	31,042	44.0	35.39
Wisconsin	38	13,903	19.7	36.23
Minnesota	53	12,377	17.6	28.52
Michigan	39	5,321	7.5	36.83
Vermont	72	4,440	6.3	34.59
New Hampshire	29	2,332	3.3	27.87
All other States (see Table 37, p. 56)	34	1,096	1.6	46.26

[1] Balsam fir (*Abies balsamea*) is the only species cut as such.

TABLE 33.—*Reported production of walnut [1] lumber in 1920.*

[Computed total production in the United States, 35,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	1,076	32,704	100.0	$88.92
Missouri	69	6,962	21.3	64.18
Ohio	150	5,589	17.1	100.72
Indiana	165	4,723	14.4	94.77
Illinois	28	2,445	7.5	102.14
Kentucky	137	2,186	6.7	83.91
Iowa	21	2,112	6.5	59.82
Tennessee	104	1,392	4.2	77.98
West Virginia	88	1,008	3.1	58.59
All other States (see Table 37, p. 56)	314	6,287	19.2	115.09

[1] Black walnut (*Juglans nigra*) is the only species cut as such.

TABLE 34.—*Reported production of lodgepole pine [1] lumber in 1920.*

[Computed total production in the United States, 31,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	103	30,136	100.0	$30.58
Montana	19	15,603	51.8	33.03
Colorado	39	10,634	35.3	29.45
Wyoming	24	2,744	9.1	23.50
All other States (see Table 37, p. 56)	21	1,155	3.8	24.71

[1] Lodgepole pine (*Pinus contorta*) is the only species cut as such.

TABLE 35.—*Reported production of sycamore [1] lumber in 1920.*

[Computed total production in the United States, 31,000 M feet.]

State.	Number of active mills reporting.	Quantity reported.		Average value per 1,000 feet f. o. b. mill.
		M feet b. m.	Per cent.	
United States	915	29,256	100.0	$32.12
Arkansas	64	6,966	23.8	36.62
Indiana	188	4,106	14.0	34.54
Mississippi	35	3,519	12.0	31.79
Missouri	98	2,667	9.1	28.56
Tennessee	46	1,991	6.8	31.13
Kentucky	120	1,915	6.6	27.89
Ohio	108	1,741	6.0	35.38
North Carolina	3	1,527	5.2	29.90
Illinois	46	1,178	4.0	24.73
All other States (see Table 37, p. 56)	207	3,646	12.5	28.22

[1] Sycamore (*Platanus occidentalis*) is the only species cut as such.

TABLE 36.—*Reported production of minor species in 1920.*

[Computed total production in the United States, 68,300 M feet.]

Kind of wood.	Number of active mills reporting.	Quantity reported, M feet b. m.	Average value per 1,000 feet f. o. b. mill.	States reporting
Total		64,158	$100.89	
Mahogany	9	21,193	211.47	Louisiana, New York, Indiana, Illinois, Ohio.
Cherry	220	8,563	76.48	West Virginia, New York, Pennsylvania, Ohio, Indiana, Tennessee, North Carolina, Michigan, Virginia, Kentucky, Vermont, Massachusetts, Arkansas, Illinois, Wisconsin, Connecticut, Maryland.
Willow	15	7,480	32.18	Louisiana, Mississippi, Arkansas, New York, Wisconsin, Virginia.
Noble fir	(1)	6,397	33.53	Oregon.
Pecan	51	3,990	38.17	Louisiana, Arkansas, Mississippi, Oklahoma, Tennessee, Illinois, Texas.
Buckeye	59	3,980	46.25	Tennessee, North Carolina, Virginia, West Virginia, Kentucky, Ohio.
Magnolia	31	3,879	36.00	Louisiana, Mississippi, Texas, Georgia, Alabama.
Hackberry	57	1,974	29.69	Arkansas, Mississippi, Louisiana, Indiana, Illinois, Oklahoma, Missouri, Alabama, Tennessee, Ohio.
Locust	52	1,700	36.14	Pennsylvania, Indiana, Arkansas, Louisiana, Maryland, West Virginia, Missouri, Mississippi, Tennessee, Virginia, Ohio, Kentucky, North Carolina, Illinois.
Alder	14	1,624	38.40	Washington, Oregon.
Butternut	63	654	46.55	West Virginia, Wisconsin, Indiana, New York, Virginia, Vermont, North Carolina, Minnesota, Pennsylvania, Tennessee, Ohio, Michigan, Kentucky.
Cucumber	19	616	49.09	West Virginia, Pennsylvania, New York, Ohio, Tennessee.
Dogwood	(1)	603	75.00	Florida, Mississippi.
Laurel	(1)	500	60.00	California.
Persimmon	16	399	85.49	Arkansas, South Carolina, Florida, Mississippi, Georgia, Missouri, Louisiana.
Spanish cedar	3	234	140.92	New York, Louisiana, Ohio.
Bellwood	(1)	117	54.46	Tennessee.
Red bay	3	93	46.09	Georgia, Alabama, South Carolina.
Apple	(1)	72	40.00	New York, Indiana.
Holly	(1)	31	111.13	Massachusetts, Mississippi.
Sassafras	8	15	41.33	Arkansas, Tennessee, Indiana.
Chittam	(1)	15	34.67	North Carolina, Tennessee.
Box elder	(1)	14	31.28	North Carolina.
Boxwood	(1)	13	[2] 100.00	Illinois.
Coffee tree	(1)	1	[2] 30.00	Arkansas.
Mulberry	(1)	1	[2] 30.00	Ohio.

[1] Less than 3 mills.

[2] Arbitrary value assigned.

LUMBER PRODUCTION BY STATES AND SPECIES.

Table 37 is a recapitulation for the United States of the 1920 lumber production figures shown in Tables 7 to 36, inclusive. The aggregate reported production of softwoods and hardwoods in each State is shown, and also the production of lath and shingles.

TABLE 37.—*Reported production of lumber, by States and species, and of lath and shingles, in 1920.*

State	Number of active saw mills reporting.	Aggregate softwoods and hardwoods.	Softwoods.														
			Total softwoods.	Yellow pine.	Douglas fir.	Western yellow pine.	Hemlock.	White pine.	Spruce.	Cypress.	Redwood.	Larch.	White fir.	Cedar.	Sugar pine.	Balsam fir.	Lodgepole pine.
		M feet b. m.	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*
United States...	15,978	29,878,360	24,253,918	8,964,313	6,956,683	2,270,898	1,685,320	1,377,327	805,320	571,674	476,003	375,103	279,645	245,079	145,906	70,511	30,136
Alabama	903	1,108,188	988,973	985,773						2,893				307			
Arizona	20	120,495	120,494		1,086	119,406							2				
Arkansas	656	1,148,158	621,159	586,369						34,790							
California and Nevada	195	1,482,102	1,481,577		161,632	509,471	50		5,300		476,003		151,957	36,030	141,134		
Colorado	151	67,847	67,836		2,615	37,191			13,859				3,457	80			10,634
Connecticut	122	44,996	6,451	54			1,980	4,383						34			
Delaware	34	11,990	9,888	9,878										10			
Florida	204	863,013	849,702	744,373						105,329							
Georgia	713	599,739	527,100	478,547			425	2,253		45,863				12			
Idaho	188	969,576	968,198		105,786	366,857	120	261,251	10,572			142,103	54,424	26,663			422
Illinois	129	44,469	1,957	35						1,922							
Indiana	404	210,045	223	1										222			
Iowa	53	12,617	20					20									
Kansas ans Nebraska.	5	4,245															
Kentucky	558	270,882	22,331	8,895			6,775	2,498		2,340				1,823			
Louisiana	271	2,719,761	2,339,379	2,066,263						273,116							
Maine	441	450,196	422,595	175			54,726	165,102	164,652			61		6,837		31,042	
Maryland	221	65,202	36,125	35,360			650	63		20				32			
Massachusetts	191	100,266	68,887	120			7,105	57,905	3,436			120		186		15	
Michigan	243	726,147	274,742				206,840	36,186	8,686			12,457		5,252		5,321	
Minnesota	246	556,265	485,315				183	429,210	31,492			11,706		347		12,377	
Mississippi	648	1,677,469	1,334,904	1,322,958						11,945				1			
Missouri	405	231,361	64,899	23,693						41,053				153			
Montana	124	409,667	408,551		55,670	173,507		5,061	21,573			112,400	22,891	1,846			15,603
New Nampshire	223	223,376	190,887				23,508	121,202	43,835			10				2,332	
New Jersey	74	16,466	6,372	5,419			178	55						720			
New Mexico	60	109,882	109,881		5,731	104,059							90	1			
New York	1,206	410,909	169,909	248			74,004	66,311	27,823			262		305		956	
North Carolina	1,215	786,412	595,689	517,425			33,271	4,180	33,588	5,913				1,312			
Ohio	473	185,881	505	125			362	18									

Oklahoma	78	154,598	135,488	135,280						208							
Oregon	659	3,316,098	3,306,463		2,347,368	630,326	89,130	2,830	165,418			17,938	14,199	34,482	4,772		
Pennsylvania	832	401,660	165,790	1,690			134,740	29,004	193					38		125	
Rhode Island	19	7,489	1,946				53	1,768						125			
South Carolina	368	520,210	472,447	436,246						36,183				18			
South Dakota	44	45,033	45,033			45,033											
Tennessee	609	554,991	127,468	74,167			32,721	3,880		5,737				10,963			
Texas	232	1,177,436	1,126,145	1,125,015						1,130							
Utah	58	7,591	7,540		427	4,135			2,087				158				733
Vermont	265	114,601	61,788				17,330	13,827	25,962			15		214		4,440	
Virginia	1,065	735,729	432,425	404,804			16,992	6,127		3,232				1,270			
Washington	584	5,524,509	5,522,768		4,275,017	278,573	495,444	69,051	192,671			66,266	32,395	113,351			
West Virginia	398	647,055	141,092	1,400			85,408	6,163	48,121								
Wisconsin	350	1,036,550	525,790				403,325	88,979	5,373			11,765		2,445		13,903	
Wyoming	41	7,188	7,186		1,351	2,340			679				72				2,744

TABLE 37.—*Reported production of lumber, by States and species, and of lath and shingles, in 1920*—Continued.

State.	Hardwoods.																	Lath.	Shingles.
	Total hardwoods.	Oak.	Maple.	Gum, red and sap.	Chestnut.	Birch.	Yellow poplar.	Beech.	Elm.	Basswood.	Tupelo.	Ash.	Cottonwood.	Hickory.	Walnut.	Sycamore.	Minor species.		
	M feet b. m.	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*Thousands.*	*Thousands.*
United States	5,624,442	1,853,580	768,345	684,745	379,675	346,577	270,407	264,572	182,845	169,276	161,055	147,618	138,076	131,553	32,704	29,256	64,158	1,952,983	6,156,416
Alabama	119,215	46,646	102	33,700	960	9	16,933	483	356	19	12,696	3,596	1,430	1,852	39	341	53	32,444	32,615
Arizona	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18,453	.....
Arkansas	526,999	225,422	6,890	194,981	.....	127	328	1,251	20,938	90	7,685	16,516	13,673	28,594	188	6,966	3,350	50,108	19,770
California and Nevada	525	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	500	36,793	167,130
Colorado	11	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	3,279	.....
Connecticut	38,545	10,257	1,350	.....	22,875	1,037	441	304	214	327	.....	554	116	810	248	.....	12	200	103
Delaware	2,102	1,602	106	338	9	.....	15	1	.....	.....	10	5	.....	15	.....	1	.....	950	4
Florida	13,311	60	.....	7,255	.....	.....	151	.....	.....	.....	1,983	1,498	550	1,214	.....	.....	600	89,948	67,689
Georgia	72,639	26,003	303	17,991	2,561	20	7,169	104	270	50	1,518	4,894	133	960	3	541	119	39,840	59,058
Idaho	1,378	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,378	.....	.....	.....	.....	97,182	25,211
Illinois	42,512	23,377	2,181	2,946	28	42	611	171	2,356	59	2,494	668	558	2,848	2,445	1,178	550	35	.....
Indiana	209,822	79,640	26,664	4,231	505	276	15,875	33,471	20,012	4,662	1,229	12,104	1,181	9,532	4,723	4,106	1,611	450	100
Iowa	12,597	3,174	466	.....	.....	107	.....	.....	1,760	947	.....	310	3,578	119	2,112	24	.....	26	.....
Kansas and Nebraska	4,245	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	370	.....	3,875	.....	.....	.....	.....
Kentucky	248,551	141,588	6,268	7,417	16,011	559	31,462	17,565	1,363	4,303	1,553	3,321	1,311	11,492	2,186	1,915	237	2,752	910
Louisiana	380,382	92,725	154	125,944	.....	8	491	10,446	5,763	229	87,038	20,051	8,165	4,913	5	725	23,725	215,738	211,503
Maine	27,601	3,283	3,465	.....	.....	17,496	.....	1,529	165	867	.....	498	298	.....	.....	.....	.....	101,704	140,038
Maryland	29,077	16,906	692	2,464	5,342	135	2,077	323	17	166	8	57	30	373	24	418	45	579	282
Massachusetts	31,379	5,380	3,143	.....	17,682	1,939	134	1,496	114	303	50	834	78	95	83	.....	48	184	708
Michigan	451,405	5,457	279,911	.....	14	58,866	409	41,987	28,951	23,562	.....	5,816	5,454	683	97	111	87	50,892	116,678
Minnesota	70,950	5,274	545	.....	.....	6,427	.....	10	4,611	5,412	.....	830	47,773	1	42	.....	25	117,300	1,678
Mississippi	342,565	115,399	1,188	147,781	.....	133	10,915	2,289	9,272	603	8,758	7,665	21,798	9,345	3	3,519	3,897	113,707	22,858
Missouri	166,462	101,667	8,679	17,304	.....	116	128	152	9,118	147	3,430	3,527	6,133	6,370	6,962	2,667	62	3,737	603
Montana	1,116	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,116	.....	.....	.....	.....	47,673	6,243
New Hampshire	32,489	5,974	7,702	.....	2,070	10,023	.....	4,447	113	653	.....	607	820	.....	80	.....	.....	10,642	1,452
New Jersey	10,094	4,838	277	181	3,764	74	372	102	109	5	36	95	.....	230	10	1	.....	3,838	5,827
New Mexico	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19,783	10
New York	241,000	32,157	72,724	.....	17,780	33,221	43	43,982	6,879	14,834	.....	9,363	784	1,068	47	14	8,104	13,484	5,630
North Carolina	190,723	82,671	5,791	8,687	47,170	2,423	20,584	2,154	75	7,616	4,730	2,741	347	2,327	288	1,527	1,592	14,182	47,403
Ohio	185,376	85,131	21,817	605	7,227	335	9,304	18,970	10,751	4,940	446	9,948	737	6,818	5,589	1,741	1,017	1,361	225

Oklahoma	19,110	7,212	62	6,546	.....	.....	.....	1	692	78	.....	504	3,160	294	7	467	87	14,173	410
Oregon	9,635	126	1,021	.....	.....	.....	.....	.....	.....	.....	.....	625	1,035	.....	.....	.....	6,828	173,732	288,721
Pennsylvania	235,870	88,729	39,194	905	45,067	6,370	4,528	34,471	1,300	4,417	235	3,867	356	3,799	504	65	2,063	13,084	3,486
Rhode Island	5,543	1,800	310	.....	3,135	64	31	30	10	.....	.....	100	.....	43	20	.....	.....	.....	20
South Carolina	47,763	5,679	1,284	20,483	.....	.....	3,789	.....	305	.....	12,278	3,372	254	43	1	164	111	9,278	5,031
South Dakota	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9,362	108
Tennessee	427,523	221,260	6,736	52,821	32,653	1,494	45,436	8,711	6,692	4,953	3,583	10,911	4,937	21,993	1,392	1,991	1,960	5,473	3,513
Texas	51,291	27,074	.....	18,033	.....	.....	.....	225	167	32	1,307	1,279	1,588	1,204	39	36	307	48,766	3,798
Utah	51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	51	.....	.....	.....	.....	382	425
Vermont	52,813	3,152	17,759	.....	1,418	15,307	.....	6,206	794	4,308	372	2,501	860	56	15	.....	65	1,188	3,524
Virginia	303,304	166,667	6,391	12,607	56,103	1,754	34,738	4,189	31	7,258	7,639	959	197	2,982	635	347	807	27,548	1,940
Washington	1,741	.....	288	.....	.....	.....	.....	.....	.....	.....	.....	.....	260	.....	.....	.....	1,193	404,942	4,847,105
West Virginia	505,963	202,499	56,630	1,525	97,301	10,910	64,443	27,826	527	19,369	1,977	5,063	91	11,448	1,008	391	4,955	33,543	128
Wisconsin	510,760	14,723	188,252	.....	.....	177,305	.....	1,676	49,120	59,067	.....	12,939	7,464	32	34	.....	148	124,198	3,479
Wyoming	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	50	.....

LUMBER VALUES.

The average values for lumber shown in Table 38 were determined for each species from the individual reports of mills, representing every variation incident to the size of mill, region, logging conditions, transportation, manufacture, and sale of lumber The values given in the tables are weighted by the quantities produced at both large mills and small mills and accurately reflect the average value of the several species of lumber at the average mill. The variation in values for the same wood in different States is largely caused by differences in the quality of timber, perfection of manufacture, and quantity produced by the mill.

Average mill values reported by associations or by exclusively large mills are usually larger than those in Table 38, probably for the reason that the larger organizations are in a position to sell to better advantage than the owners of small mills.

The average value of $38.42 per thousand for all lumber sawed in 1920 is an increase of $8.21 or 27 per cent above the 1919 valuation. This is the highest value, and the greatest increase in value per year, for which statistics are available. All species shared in the advance.

For valuations of the total cut, the cut of each State, and the cut of geographic groups, refer to Table 4A, page 34. The value of the 1920 cut exceeded that of 1919 by $255,000,000. In the consideration of all lumber values at the present period the decreased purchasing power of the dollar should be kept in mind. The lumber cut of 1899, which was only about a billion feet greater than that of 1920, was valued at $385,300,000, while the cut of 1920 is valued at $1,298,900,000. The increase in valuation for approximately the same quantity is 237 per cent.

TABLE 38.—*Average value f. o. b. mill per 1,000 feet board measure, by kinds of wood, for specified years, 1909–1920.*

Kind of wood.	1920	1919	1918	1917	1916	1915	1911	1910	1909
All kinds	$38.42	$30.21	$24.79	$20.32	$15.32	$14.04	$15.05	$15.30	$15.38
Softwoods:									
Yellow pine	35.89	28.71	24.38	19.00	14.33	12.41	13.87	13.29	12.69
Douglas fir	34.59	24.62	18.77	16.28	10.78	10.59	11.05	13.09	12.44
Western yellow pine	38.73	27.75	20.87	19.59	14.52	14.32	13.62	14.25	15.39
Hemlock	32.05	29.16	23.97	20.78	15.35	13.14	13.59	13.85	13.95
White pine	41.49	32.83	30.84	24.81	19.16	17.44	18.54	18.93	18.16
Spruce	38.94	30.76	28.65	24.41	17.58	16.58	16.14	16.62	16.91
Cypress	51.02	38.38	30.56	23.92	20.85	19.85	20.54	20.51	20.46
Redwood	46.90	30.04	24.30	21.00	13.93	13.54	13.99	15.52	14.80
Larch (tamarack)	30.28	23.39	19.86	16.21	12.49	10.78	11.87	12.33	12.68
White fir	30.44	25.66	19.61	17.16	12.25	10.94	10.64	11.52	13.10
Cedar	38.68	33.80	24.86	19.40	15.24	16.10	13.86	15.53	19.95
Sugar pine	48.76	35.99	28.26	24.69	16.77	17.40	17.52	18.68	18.14
Balsam fir	34.33	32.23	27.27	20.02	16.49	13.79	13.42	14.48	13.99
Lodgepole pine	30.58	29.98	20.95	18.34	15.13	13.57	12.41	14.88	16.25
Hardwoods:									
Oak	46.88	37.87	31.11	24.49	20.06	18.73	19.14	18.76	20.50
Maple	50.16	35.56	29.05	23.16	18.24	15.21	15.49	18.16	15.77
Gum, red and sap	35.24	32.68	23.21	19.56	14.64	12.54	12.11	12.26	13.20
Chestnut	42.48	32.30	27.31	21.54	17.05	16.17	16.63	16.23	16.12
Birch	53.44	35.79	29.94	24.07	19.59	16.52	16.61	17.37	16.95
Yellow poplar	58.87	41.65	35.06	27.17	21.89	22.45	25.46	24.71	25.39
Beech	36.51	29.97	25.06	19.58	16.20	14.01	14.09	14.34	13.25
Elm	47.23	36.39	28.19	22.89	19.46	16.98	17.13	18.67	17.52
Basswood	54.28	40.03	34.00	25.96	21.05	18.89	19.20	20.94	19.50
Tupelo	33.68	28.42	22.73	18.06	13.00	12.25	12.46	12.14	11.87
Ash	61.28	52.69	38.70	30.01	23.85	22.15	21.21	22.47	24.44
Cottonwood	33.38	32.24	26.13	23.19	17.42	17.36	18.12	17.78	18.05
Hickory	52.57	44.37	37.95	29.48	23.84	23.35	22.47	26.55	30.80
Walnut	88.92	72.13	77.60	72.99	42.38	48.37	31.70	34.91	43.79
Sycamore	32.12	30.42	23.59	18.68	14.65	13.86	13.16	14.10	14.87

LATH PRODUCTION, BY STATES.

Washington outstripped Louisiana in the production of lath for 1919, and in 1920 increased its lead. The output in the latter year was 21 per cent of the total production. Oregon also moved up from fourth to third place, and is increasing, while Louisiana has decreased in production for six years.

TABLE 39.—*Reported production of lath, 1917–1920.*

State.	Number of active mills reporting.				Quantity reported (thousands of pieces).			
	1920	1919	1918	1917	1920	1919	1918	1917
United States	1,290	1,133	909	1,456	1,952,983	1,724,078	1,362,187	2,281,738
Washington	69	72	42	58	404,942	339,058	154,668	230,194
Louisiana	51	59	53	68	215,738	199,018	236,543	348,806
Oregon	41	37	23	32	173,732	122,848	78,780	132,418
Wisconsin	101	82	75	113	124,198	138,936	122,858	185,074
Minnesota	42	44	31	45	117,300	115,741	155,905	213,092
Mississippi	28	28	27	33	113,707	96,204	81,598	133,925
Maine	82	71	50	106	101,704	104,223	62,671	142,488
Idaho	24	23	20	22	97,182	69,150	70,494	86,264
Florida	36	34	22	27	89,948	76,402	55,171	97,954
Michigan	44	53	42	62	50,892	51,469	48,533	84,352
Arkansas	28	25	30	31	50,108	72,827	26,481	147,578
Texas	15	10	11	18	48,766	35,916	21,866	47,654
Montana	20	11	11	16	47,673	21,362	21,903	23,332
Georgia	24	13	12	25	39,840	19,718	19,083	46,889
California	20	18	10	20	36,793	53,042	22,281	37,651
West Virginia	41	37	29	54	33,543	22,005	33,289	44,233
Alabama	24	24	18	31	32,444	42,502	25,227	39,685
Virginia	62	46	50	71	27,548	27,073	16,902	30,244
All other States (see Summary, p. —)	538	446	353	624	146,925	116,584	107,934	209,905

SHINGLE PRODUCTION, BY STATES.

Shingle production has decreased about 60 per cent since 1905, owing largely to the introduction of other forms of roofing. Washington and Oregon have for many years held the lead in shingle production, and together in 1920 manufactured 83 per cent of the total output. (Fig. 16.)

TABLE 40.—*Reported production of shingles, 1917–1920.*

State.	Number of active mills reporting.				Quantity reported (thousands of pieces).			
	1920	1919	1918	1917	1920	1919	1918	1917
United States	1,133	1,726	1,052	1,619	6,156,416	9,192,704	5,690,182	8,696,513
Washington	206	292	158	230	4,847,105	7,095,122	4,238,714	6,313,364
Oregon	21	53	25	42	288,721	530,066	281,138	481,353
Louisiana	34	52	44	55	211,503	300,784	272,866	453,819
California	38	40	20	41	167,130	191,831	146,071	261,434
Maine	137	182	100	150	140,038	188,576	87,193	166,101
Michigan	40	63	48	69	116,678	144,173	148,565	203,907
Florida	32	71	37	49	67,689	128,286	102,725	143,792
Wisconsin	45	58	63	73	64,479	96,928	91,907	151,726
Georgia	81	142	37	116	59,058	114,806	46,395	112,430
North Carolina	45	74	66	110	47,403	92,139	48,080	73,703
Alabama	70	124	60	94	32,615	62,241	50,065	54,735
Idaho	6	3	4	7	25,211	22,657	32,893	52,631
Mississippi	17	28	16	32	22,858	34,002	18,431	39,261
Arkansas	29	63	35	44	19,770	98,937	25,870	59,927
All other States (see Summary, p. —)	332	481	339	507	46,158	92,156	99,269	128,330

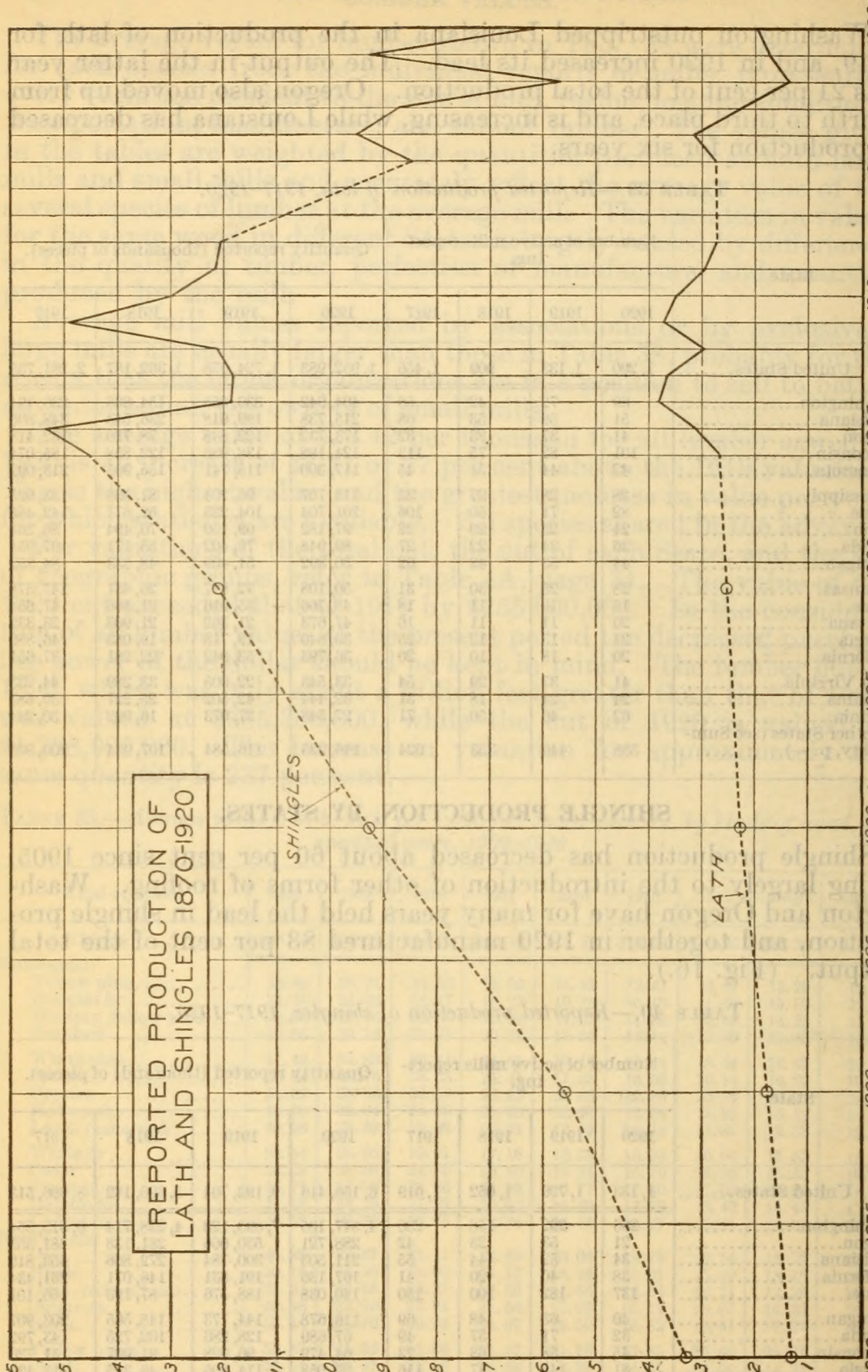

FIG. 16.—The production of wooden shingles has definitely passed its peak, probably as the result of the introduction of other forms of roofing material.